

EXHIBIT 1:
U.S. Patent 5,440,961 to Lucas, Jr. et al. (hereinafter,
“**Lucas**”)



US005440961A

United States Patent [19]

Lucas, Jr. et al.

[11] Patent Number: 5,440,961

[45] Date of Patent: Aug. 15, 1995

[54] FILM CUTTING APPARATUS AND METHOD

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[21] Appl. No.: 185,335

[22] Filed: Jan. 24, 1994

[51] Int. Cl.⁶ B26D 1/18

[52] U.S. Cl. 83/455; 83/489;

83/578; 83/614

[58] Field of Search 83/578, 56, 489, 614, 83/455

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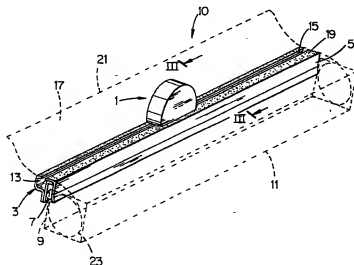
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Primary Examiner—Kenneth E. Peterson
Attorney, Agent, or Firm—Alan T. McDonald

[57] ABSTRACT

A film cutting apparatus includes a guide having a clip for attachment to a film material container and a cutting device designed to travel along said guide to sever the film material in predetermined lengths. The cutting device includes two pairs of guide wheels designed to travel in a channel in the guide beneath the cutting plane defined by a top surface thereof. The cutting device also includes a housing having disposed therein a star cutter, a star cutter driver assembly and a plate assembly attached to the housing providing rotatable support for the star cutter driver assembly and guide wheels. In use, the housing is gripped by a user and driven along the length of the guide. During housing travel, the star cutter driver assembly rotatably engages the guide top surface to rotate the star cutter and sever the film material lying in the path of the star cutter. The guide has a non-slip top surface so that the film material adheres thereto during cutting. The star cutter drive assembly includes a resilient material engaging surface to compensate for variations in film material thickness during cutting.

6 Claims, 3 Drawing Sheets



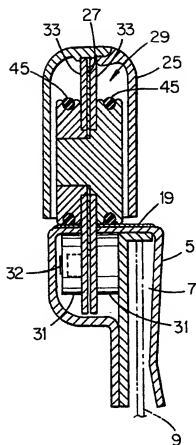


FIG. 3

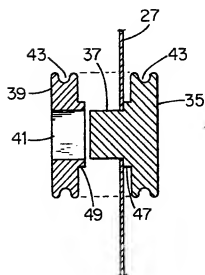


FIG. 4

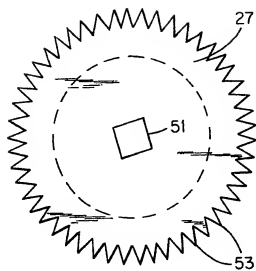


FIG. 5

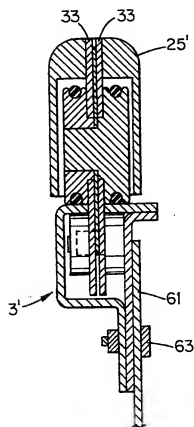


FIG. 6

FILM CUTTING APPARATUS AND METHOD

FIELD OF THE INVENTION

The present invention is directed to a film cutting method and apparatus and, in particular, to a star wheel cutting device in combination with a cutting guide to sever film material, such as foodservice wrap.

BACKGROUND OF THE INVENTION

In the prior art, various types of film material cutting apparatus have been proposed utilizing a traveling cutter. U.S. Pat. No. 4,960,022 to Chuang discloses a plastic film cutter comprising a supporting board, a sliding furrow formed in the top of the supporting board and a slidable cutting means having a lower sliding seat insertable into the sliding furrow. In Chuang, rollers are provided for engaging and maintaining the plastic film in a tensioned state above the upper surface of the plastic film.

Other patents disclosing film cutters include U.S. Pat. Nos. 5,036,740 to Tsai, 5,044,241 to Labrecque and 4,787,284 to Chen.

However, prior art devices using a cutting blade are ineffective to handle or accommodate variations in film material thickness, such as bunched or doubled over film. Likewise, apparatus such as disclosed in Labrecque involve complex mechanical interaction to achieve effective cutting.

In response to these deficiencies, a need has developed to provide an effective yet simple film cutting apparatus which overcomes deficiencies in prior art designs.

In response to this need, the present invention provides a simple yet effective film cutting apparatus design which severs film material easily and efficiently.

SUMMARY OF THE INVENTION

Accordingly, it is a first object of the present invention to provide an improved film cutting apparatus and method.

It is a further object of the present invention to provide a film cutting apparatus and method which includes a star cutter wheel driven by a roller assembly which effectively severs film material.

Another object of the present invention is to provide a film cutting apparatus and method wherein the film material is held in place independently of the cutting device to permit ease of cutting operation.

Other objects and advantages of the present invention will become apparent as the description thereof proceeds.

In satisfaction of the foregoing objects and advantages, the present invention provides a cutting device comprising a housing and a toothed cutting wheel of a first diameter, the toothed cutting wheel disposed in at least a portion of the housing. A rotating means for rotating the toothed cutting wheel is disposed in at least a portion of the housing and includes a resilient film material engaging surface thereon which defines a cutting plane coincident with the film material being cut. A plurality of guide wheels for guiding the cutting device during travel thereof are positioned beneath the cutting plane by a supporting means attached to the housing. The supporting means also supports the rotating means which is disposed above the cutting plane for rotatable

movement thereof as well as for driving and rotating the toothed cutting wheel.

In conjunction with the cutting device, a cutting guide comprises an elongated member having a channel therethrough which is sized to receive the guide wheels of the cutting device. The elongated member has a top surface parallel to the cutting plane, the top surface having a high friction surface thereon to adhere the film material thereto during cutting thereof. The elongated member also has a slot in the top surface in communication with the channel, the slot being sized to receive the cutting wheel during rotation thereof, as well as the means for supporting the guide wheels.

In a preferred embodiment, the rotating means for rotating the cutting wheel comprises a roller assembly made up of two rollers which interconnect to fixedly mount the toothed cutting wheel thereto. Each of the rollers has recesses along a circumferential edge thereof to receive an O-ring which provide resilient engagement with the film material during cutting. A pair of plates, attached to the housing, are also disposed between the rollers, the cutting wheel disposed therebetween. The plates provide rotatable support for the rollers during travel of the cutting device, as well as spaced apart support of the guide wheels during travel in the channel of the cutting guide.

In the method aspect of the invention, the cutting device and cutting guide are mounted adjacent to a source of film material for cutting a predetermined length. The film material is adhered to the high friction surface of the cutting guide. Following the adhering step, the cutting device travels along the guide with the O-rings engaging the upper surface of the film material, rotation thereof driving the toothed cutting wheel to perforate and sever the film material. The guide wheels travel in the channel of the cutting guide and provide guidance and stability to the cutting device during longitudinal movement thereof.

BRIEF DESCRIPTION OF THE DRAWINGS

Reference is now made to the drawings describing the invention wherein:

FIG. 1 is a perspective view of the film cutting apparatus showing an exemplary use;

FIG. 2 is a side view of the cutting device in engagement with a portion of the cutting guide;

FIG. 3 is a cross-sectional view of the cutting device taken along the line III—III of FIG. 1;

FIG. 4 is an cross-sectional view of the roller depicted in FIG. 3;

FIG. 5 is a side view of an exemplary star cutter; and FIG. 6 is a cross-sectional view similar to FIG. 3 showing an alternative embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to FIG. 1, the inventive film cutting apparatus is generally designated by the reference numeral 10 and includes a cutting device 1 which is designed to travel along a guide 3. The guide 3 has a clip 5 which forms a recess 7 to receive a sidewall 9 of an elongated film material container 11.

The guide 3 also includes a channel 13 and slot 15. The channel 13 receives guide wheels (not shown) of the cutting device 1 with the slot 15 providing an opening which permits cutting of the film material 17 and support of the guide wheels.

The guide 3 also has a non-slip top surface 19 which retains and tensions the film material 17 during cutting thereof. The non-slip surface 19 is preferably a urethane tape which is adhered to the guide 3. Of course, other coatings or tapes may be used to create a non-slip surface on the guide 3, as long as the material provides a sufficiently high friction surface such that the film material 17 clings thereto.

In use, the guide 3 is placed on the sidewall 9. A predetermined length of the film material 17, as measured from the free end 21 thereof to the slot 15, is unraveled from the film material roll 23. The film material 17, once contacting the non-slip surface 19, adheres thereto for subsequent cutting. The cutting device 1 is then passed through the channel 13 and slot 15 to sever the film material 17 while it is tensioned by the non-slip surface 19. The function of the cutting device 1 in relation to the channel 13 and slot 15 will be described hereinafter.

The film material 17 may be any known material having a thickness which is easily severed by a rotating cutting blade. For example, the film material 17 may include typical foodservice wraps, such as aluminum foil or plastic wrap.

With reference now to FIG. 2, a side view of the cutting device is illustrated depicting a housing 25 enclosing at least a portion of a star cutter 27 and a star cutter driver assembly 29. The housing is preferably sized for hand holding to facilitate manual cutting action.

The cutting device further includes two pairs of guide wheels 31, one guide wheel of each pair depicted in FIG. 2. The pairs of guide wheels are rotatably mounted on axes 32 and supported by the guide wheel support plates 33, only one support plate shown in FIG. 2.

Each of the guide wheel support plates 33 comprises an elongated connector 34 which positions the guide wheels 31 in a spaced apart relationship from each other and with respect to the under surface 35 and which preferably extends laterally beyond the guide wheels 31 to protect the guide wheels from contacting end stops of channel 13 during movement of the cutting device 1 through channel 13. A circular portion 36 of each plate 33 provides connection between the connector 34 and the housing 25, as well as rotatable support for the star cutter driver assembly 29, as described hereinafter.

During cutting of the film material 17, the star cutter driver assembly 29 rotates and travels along the non-slip surface 19 with the guide wheels 31 contacting the opposing surface 35 in the channel 13; see FIG. 1. As will be described hereinafter, travel and rotation of the star cutter driver assembly 29 rotates the star cutter 27 during linear movement of the cutting device 1 to sever the film material 17 along the slot 15.

With reference to FIGS. 3 and 4, the star cutter driver assembly 29 is designed to provide a fixed mount for the star cutter 27 while still rotating with respect to the linearly traveling guide wheel support plates 33.

With particular reference to FIG. 4, the star cutter driver assembly includes a first roller 35 having a male portion 37 extending therefrom. A second roller 39 includes a female opening 41 sized to engage the male portion 37 of the first roller 35. In cross section, the male portion 37 is square in shape; see FIG. 2, to fixedly mount the star cutter 27 thereon. As can be seen from FIG. 4, the star cutter 27 is fixedly mounted on the male portion 37.

The square cross-sectional male portion 37 is preferably designed to pressure fit or snap into the female opening 41 in the second roller 39. That is, friction between the outer surface of the male portion 37 and female opening 41 maintain connection between the two rollers. Of course, other known attachment means, including fasteners or the like, may be employed to provide removable attachment between the first and second rollers. The removable attachment facilitates star cutter and roller replacement or repair.

Each of the first and second rollers, 35 and 39 respectively, has a recess 43 in a peripheral edge thereof. The recesses 43 are sized to receive an O-ring 45. The O-rings provide a resilient film material engaging surface during travel of the cutting device 1 along the guide 3. The O-rings, by their resilience, compensate for any tolerance variations that may be present in the film material 17 to be cut. Although O-rings are shown as the resilient film material engaging surface, other known resilient materials, such as a tape, may be used on the peripheral edges of the first and second rollers 35 and 39 to provide the requisite resilience and compensation described above. Alternatively, the rollers 35 and 39 can be made such that at least the peripheral portion thereof are resilient for contact with the film material 17.

The guide wheel support plates 33 also rotatably support the star cutter driver assembly 29. With particular reference to FIG. 3, each of the plates 33 is mounted to the housing 25 and extends downwardly therefrom. Each of the plates 33 has a circular opening 48; see FIG. 2, which corresponds to the cylinder defined by the step 47 of the first roller 35 and step 49 of the second roller 39; see FIG. 4. The steps 47 and 49, when the first and second rollers 35 and 39 are connected, form a cylindrical surface which permits the star cutter driver assembly to freely rotate within the circular openings 48 defined by the plates 33 during linear travel of the cutting device 1. It should be understood that FIG. 4, showing a cross-sectional view of the first and second rollers 35 and 39 in conjunction with the star cutter 27, omits the guide wheel supporting plates 33 for clarity.

Preferably, the rollers 35 and 39 are sized in diameter less than the star cutter 27 so that the star cutter 27 has a peripheral edge velocity greater than the rollers' peripheral edge velocity and linear travel of the housing to improve cutting action.

In a preferred embodiment illustrated in FIG. 3, the guide wheels 31 are formed with outer surfaces 60 and spring-like resilient adjustment portions 62 to enable the surfaces 60 to firmly engage surface 35 while allowing for variations in the thickness of the material forming surfaces 19 and 35. This is not mandatory, however, as will be shown below.

With reference again to FIG. 3 and FIG. 5, the star cutter 27 is fixedly mounted between first and second rollers, 35 and 39, respectively, by virtue of the square opening 51 engaging the square male portion 37 of the first roller 35. The star wheel 27 has a plurality of teeth which function to sever the film material 17 by the perforating action of the individual teeth 53. In FIG. 5, a sixty four tooth star cutter 27 is depicted. However, star cutters having different numbers of teeth can also be utilized in the inventive cutting device, for example, an eighty tooth wheel; see FIG. 2, or a fifty tooth wheel.

FIG. 6 depicts an alternative embodiment to the invention wherein the guide wheel supporting plates 33

are sandwiched by the housing 25'. This embodiment also illustrates the guide 3' without the clip 5 for attachment to the sidewall of a film material container. In this embodiment, the guide 3' can be attached to a surface 61 by a fastener 63 or the like for film material cutting. In addition, the guide wheels 31' are solid wheels and do not employ the spring-like resilient adjustment portions 62 shown in FIG. 3.

The present invention may be constructed out of any known materials including non-metallic and metallic materials. For example, the cutting device 1 and guide 3 may be made of a durable plastic to withstand repeated traversals of the guide 3 by the cutting device 1. The star cutter 27 is preferably made of a metallic material to provide a durable cutting edge during use.

The inventive film cutting apparatus provides improvements over prior art cutting apparatus when used with thin film material. Use of a star cutter or toothed wheel cuts film material such as foodservice plastics even when folded or bunched together.

Cutting is further enhanced as a result of the star cutter driver assembly which causes the peripheral edge of the star cutter to rotate at a speed greater than the linear speed of the cutting device when traversing the guide.

Use of a non-slip friction surface eliminates the need for complex mechanical arrangements above the cutting plane defined by the non-slip friction surface, thereby simplifying manufacturing and reducing manufacturing costs.

Driving the star cutter using a resilient material engaging surface also compensates for variances in the film material thickness to be cut. Thus, the stability of the cutting device during cutting is maintained in spite of any tolerance variations such as doubled up or bunched film material.

As such, an invention has been disclosed in terms of preferred embodiments thereof which fulfill each and every one of the objects of the present invention as set forth hereinabove and provide a new and improved film cutting apparatus.

Various changes, modifications and alterations from the teachings of the present invention may be contemplated by those skilled in the art without departing from the intended spirit and scope thereof. Accordingly, it is intended that the present invention only be limited by the terms of the appended claims.

What is claimed is:

1. A film material cutting apparatus comprising a cutting device and a cutting guide, said cutting device comprising:

- a) a housing;
- b) a cutting wheel having a first diameter, said cutting wheel disposed in at least a portion of said housing;
- c) a roller assembly for rotating said cutting wheel, said roller assembly including a pair of rollers and means for removably attaching said rollers together for fixedly mounting said cutting wheel to said roller assembly coaxially therewith such that

rotation of said roller assembly drives said cutting wheel rotatively, wherein each of said rollers has a second diameter smaller than said first diameter such that a cutting wheel edge velocity is greater than a roller circumferential edge velocity during travel of said cutting device and such that said cutting wheel contacts a given portion of said film material in advance of said roller assembly during travel of said cutting device, said roller assembly having a resilient film material engaging surface defining a cutting plane coincident with said film material when being cut and being disposed in at least a portion of said housing;

- d) a plurality of guide wheels for guiding said cutting device during travel thereof;
- e) means for supporting said guide wheels below said cutting plane and for supporting said roller assembly above said cutting plane, said means for supporting attached to said housing and said roller assembly engaging said supporting means to permit rotation of said roller assembly and said cutting wheel;
- f) said curing guide comprising an elongated member having:
 - i) a channel therethrough sized to receive said plurality of guide wheels;
 - ii) a top surface parallel to said cutting plane, said top surface having a high friction surface comprising a urethane tape applied to said top surface thereon to adhere said film material to said high friction surface during cutting; and
 - iii) a slot in said top surface communicating with said channel, said slot sized to receive said cutting wheel during rotation thereof and said means for supporting said plurality of guide wheels.

2. The film material cutting apparatus of claim 1 further comprising a means for attaching said cutting guide to a film material container.

3. The film material cutting apparatus of claim 1 wherein said cutting wheel has a plurality of teeth to perforate said film material and wherein said resilient film material engaging surface defining said cutting plane comprises at least one O-ring.

4. The film material cutting apparatus of claim 1 wherein each said roller has a slot on a circumferential edge thereof for receiving said resilient film material engaging surface.

5. The film material cutting apparatus of claim 4 wherein each said resilient film material engaging surface is an O-ring.

6. The film material cutting apparatus of claim 1 wherein said means for supporting further comprises a pair of plates attached at one end thereof to said housing, each said plate having a circular opening therethrough for receiving said roller assembly to permit rotation of said roller assembly, said cutting wheel being disposed between said plates.

* * * * *

EXHIBIT 2:
U.S. Patent 3,549,066 to Wankow (hereinafter,
“Wankow”)

United States Patent

[11] 3,549,066

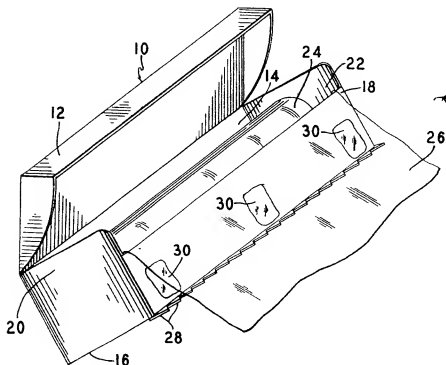
[72] Inventor	Joseph E. Wankow Somerville, N.J.	2,888,181	5/1959	Lincoln et al.	225/48UX
[21] Appl. No.	737,926	3,028,060	4/1962	Haley	225/53
[22] Filed	June 18, 1968	3,114,488	12/1963	Mounts	225/48X
[45] Patented	Dec. 22, 1970			FOREIGN PATENTS	
[73] Assignee	Union Carbide Corporation a corporation of New York	158,308	8/1954	Australia	225/25

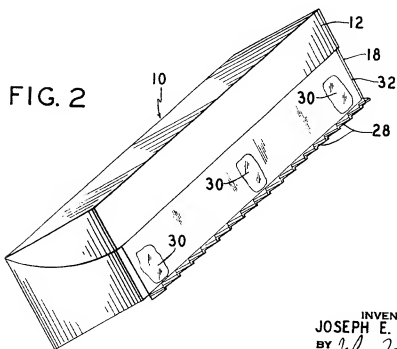
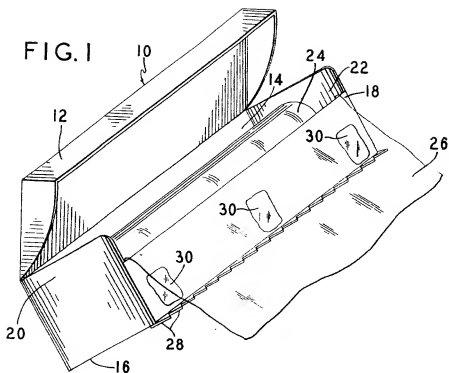
Primary Examiner—Frank T. Yost
Attorneys—Paul A. Rose, John F. Hohmann and John R. Doherty

[54] DISPENSING CARTON	
10 Claims, 2 Drawing Figs.	
[52] U.S. Cl.	225/25, 225/48
[51] Int. Cl.	B26f 3/02
[50] Field of Search	225/25, 26, 49, 48, 50, 53, 90; 206/52, 58

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ABSTRACT: An improved dispensing carton is provided for dispensing household wrapping materials. The improvement involves positioning on the carton, means which will detachably adhere the leading edge of the wrapping material to the carton during the procedure of severing a sheet of wrapping material from the supply roll. This adherence of the leading edge of the wrapping material to the carton facilitates tearing, prevents the leading edge from withdrawing into the carton, and prevents the leading edge from being wrinkled or torn.





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1 DISPENSING CARTON

This invention relates to an improvement in a dispensing carton and more particularly to an improvement in a carton for dispensing household wrapping material such as polymeric film.

It has heretofore been known to dispense household wrapping materials from dispensing cartons which are designed to store the supply roll of wrapping material when not in use, allow easy removal of wrapping material through an opening provided in the carton, and permit easy tearing of the wrapping material along a cutting edge in association with the carton.

Early designs of these cartons placed the cutting edge along the aperture from which the wrapping material was withdrawn from the carton. It was soon found, however, that this procedure was not satisfactory since the leading edge of the wrapping material would retract into the carton after a sheet of material had been withdrawn and severed along the cutting edge. When one desired to withdraw additional wrapping material, it was necessary to open the carton and to locate the leading edge of the wrap before easy operation of the carton would be restored. This procedure became increasingly more troublesome when used in conjunction with wrapping materials from polymeric film since many of these films display cling characteristics and, upon retraction into the carton, the leading edge may cling to the supply roll making location of the leading edge and separation thereof from the roll quite difficult.

"Cling" as used herein is that property of a polymeric film either imparted thereto by suitable additives or occurring naturally therein which enables the film to stick or "cling" to itself or to other smooth surfaces. Naturally occurring cling may be either of two types. The first, sometimes called autolocking, is caused by the ability of the film to form intimate contact with smooth surfaces. This type of cling is very similar to that imparted by the addition of cling modifiers. The second type of naturally occurring cling is that created by the tendency of the film to pick up a static charge. This type of cling is greatly dependent upon atmospheric conditions and is usually not as reliable as the other types of cling. For example, a polyethylene film exhibiting only static cling may cling well in cool dry weather but will have little cling in moist warm weather.

In an attempt to remedy the deficiencies in the dispensing carton described above, the cutting edge has commonly been positioned at a point removed from the aperture of the carton, for example, at the corner adjacent to the aperture of the carton. In this manner, after a sheet of the wrapping material is withdrawn and severed on the cutting edge, a length of the leading edge of the roll is exposed on the exterior of the carton and is ready to be grasped when it is next desired to withdraw a sheet of the wrapping material. It has been found, however, that even when the leading edge of the roll is so exposed, there is a tendency of the leading edge to retract into the carton after repeated handling. In addition, the leading edge, which is exposed from the carton, is free to wrinkle or fold upon itself in a manner which is undesirable from an appearance standpoint and which is bothersome when the sheet material possesses cling characteristics and does not readily return to the form of a straight leading edge. It has also been found, in use of the cartons described above, that the supply roll is not positively held during the severing operation and that, unless the tearing operation is done properly each time, the wrapping material will slide across the cutter bar during tearing thereby making tearing of the wrap more difficult.

It is an object of the present invention to provide a dispensing package for sheet material which will prevent the leading edge of the sheet material from retracting into the carton.

It is a further object to provide a dispensing package for sheet material which will retain the leading edge of the sheet material in a position such that it can be easily grasped when it is desired to withdraw additional material.

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It is a further object of this invention to provide a dispensing package wherein the leading edge of the sheet material is prevented from wrinkling or tearing due to its protrusion from the dispensing package.

It is a further object of the invention to provide a dispensing package for sheet material which will facilitate the tearing of the sheet material on a cutter bar positioned in association with the package.

These and other objects are accomplished by providing a dispensing carton for a roll of sheet material which has a container having an elongated aperture along its periphery for withdrawing sheet material from a supply roll positioned within the container, cutting means in association with the container, and means positioned on the container proximate to the cutting means for detachably adhering the sheet material thereto.

One embodiment of the invention will be more particularly described with reference to the accompanying drawings in which:

FIG. 1 is a front perspective view of a dispensing carton in accordance with the present invention showing the carton lid open and the manner in which the wrapping material is dispensed; and

FIG. 2 is a front perspective view showing the carton and wrapping material of FIG. 1 after a sheet of wrapping material has been torn on the cutting edge of the carton.

Referring in more detail to the drawings there is shown an embodiment of the invention wherein the wrapping material is a polymeric film exhibiting cling properties.

The drawings show a dispensing carton generally designated 10 having a cover 12, a rear wall 14, a bottom 16, a front wall 18, and sides 20, 22.

The front wall 18 and rear wall 14 are connected to the front and rear edges, respectively, of the bottom 16, and are joined at the ends by sides 20, 22. The cover 12 is hingedly connected to the rear wall 14 in a manner such that, when the cover 12 is opened (FIG. 1), a roll 24 of polymeric film can be positioned within the carton 10, and, when the cover 12 is closed (FIG. 2), an aperture is formed between the cover 12 and the front wall 18, permitting easy withdrawal of a sheet 26 of polymeric film.

A cutter bar 28, preferably a saw-toothed metal strip, is located at the lower edge of the front wall 18 to permit easy severance of the sheet 26 of polymeric film after the desired length has been withdrawn from the carton 10.

Clear vinyl spots 30, which embody the improvement of the present invention, are positioned on the front wall 18 proximate to the cutter bar 28. These spots are made from a vinyl resin and possess cling characteristics by virtue of their smooth surface and the addition of a cling additive to the resin.

A tear strip (not shown) may be provided on the leading edge of the cover 12 in a manner such that it extends over the front wall 18 of the carton and covers the cutting edge of the cutter bar 28. The usual functions of the tear strip are to seal the carton, to mask the sharp edges of the cutter bar and to provide an easy means of opening the carton.

When used in conjunction with the vinyl spots 30, the tear strip serves the additional function of covering and protecting the spots during shipping and handling prior to using the polymeric film.

When it is desired to withdraw a portion of the polymeric film, it is necessary merely to pull the tear strip to open the carton, grasp the leading edge of sheet 26 and withdraw the desired length through the aperture. The film is then torn against the cutter bar 28 in the manner commonly used in dispensing cartons of this type.

When the sheet 26 is pulled across the cutter bar 28 to effect cutting, the new leading edge 32 (FIG. 2) of the polymeric film, which covers the front wall 18 of the carton, is brought into contact with the front wall 18 and with the vinyl spots 30.

The spots exhibit cling characteristics and will automatically cause the polymeric film to adhere to the front wall 18. The new leading edge 32 is thereby held securely against the vinyl spots 30 during and after the cutting operation. This adhesion prevents additional polymeric film from being accidentally unrolled during the cutting operation.

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and holds the edge of the sheet securely thereby facilitating tearing. In addition, after the cutting operation, the leading edge is held against the spots and is restrained from retracting into the carton, from folding upon itself, wrinkling, or sustaining other damage.

When it is desired to withdraw an additional sheet of polymeric film, it is necessary merely to grasp the leading edge at the area between the vinyl spots, where the edge is not held to the carton, and to apply a slight force to overcome the cling tendency of the spots. In this manner, the new leading edge is freed from the vinyl spots and can be grasped to withdraw the desired length of polymeric film. This procedure can be repeated continually until the supply roll of polymeric film is exhausted.

skilled in the art that the same inventive concept will be applicable to other household dispensing cartons, for example, those used for waxed paper, aluminum foil, etc. In these instances, since the wrap material does not have cling characteristics, it is necessary to attach a "sticky" rather than a "cling" material to the front face of the carton. This can easily be accomplished by attaching any of the well known adhesives to the front face of the carton either in the form of a double-faced tape or as an adhesive forming liquid applied in the same manner as the vinyl lacquer.

The following table lists various spot materials and describes the manner in which they can be used with dispensing cartons for the common household wrapping materials.

TABLE I

Wrapping material	Spot material	Manner of application of spot material
Polymeric film exhibiting cling characteristics.....	Vinyl chloride, copolymer of vinyl acetate, with or without the addition of cling modifiers. Phenolic spar varnish.....	Dissolve in methyl ethyl ketone and print on front wall of carton. Dissolve in mineral spirits and print on front wall of carton.
	Acrylic resin.....	Dissolve in toluene and print on front wall of carton.
	Shellac.....	Dissolve in ethanol and print on front wall of carton.
	Semirigid vinyl film, polyethylene film, plasticized vinyl film. Mild pressure sensitive adhesive.....	Adhesively secured to carton. Dissolve in suitable solvent and print on front wall of carton or apply as a double-faced tape.
Waxed paper, aluminum foil, coated freezer paper, polymeric film exhibiting no cling characteristics.....	Pressure sensitive adhesive.....	Do.

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The term "vinyl" as used herein and in the claims refers to vinyl chloride and copolymers of vinyl chloride. The particular vinyl spots described above and shown in the drawings consist of spots of a copolymer of vinyl chloride and vinyl acetate modified to display cling characteristics by the incorporation of a plasticizer and a monoglyceride of a fat-forming fatty acid. Spots of this type can be used with many polymeric films and all polymeric films of the type used for household wrapping materials will cling to these spots. In fact, any lacquer coating which displays cling characteristics or which can be modified to incorporate a cling additive can be used with all polymeric films of the type used for household wrapping materials.

However, the majority of the polymeric films used for household wrapping material today exhibit cling characteristics themselves. When applying the teachings of the present invention to such films, the spot material need not have imparted cling characteristics. It is necessary only that the spots be formed of a material to which the cling film will adhere. Such materials are well known in the art and typically comprise any materials which will yield a smooth glossy surface, for example, alkyl coatings, phenolic varnishes, epoxy coatings, acrylic coatings and shellac.

Each of the materials described above can be applied to the carton merely by dissolving the material in an appropriate solvent and printing or painting same on the carton in any convenient configuration, e.g., dots, lines, etc.

In addition, the spots can be applied in the form of preformed dots or strips which are adhesively secured to the carton. For example, strips of high gloss semirigid vinyl, plasticized vinyl or polyethylene can be applied with a double-faced tape and will function in the same manner as the lacquers described above.

Any material which will cling to the particular polymeric film which is being used can be attached to the front face of the carton to obtain the desired result. Likewise, while the invention has been described with reference to the use of a dispensing carton for polymeric film it will be obvious to those

The spot materials and methods of application in table I are merely exemplary and substitutions will be obvious to those skilled in the art.

The practice of the preferred embodiments of the present invention will be described in more detail in the following examples which are set forth as being illustrative of the manner in which the invention can be practiced and are not intended, in any way, to be limitative thereof.

EXAMPLE I

A solution was prepared by dissolving 25.0 parts of a resin consisting of approximately 86 percent vinyl chloride and 14 percent vinyl acetate with 7.5 parts dioctyl phthalate in 67.5 parts methyl ethyl ketone. A No. 3 Osborn artist paint brush was dipped in the solution, the excess was allowed to drain, and a spot approximately $\frac{3}{8}$ " \times $\frac{1}{4}$ " was painted at three spaced points on the front wall of a carton of the type described above and shown in the drawings. The solvent was allowed to evaporate and a second coat was applied to bring the final thickness of the coating to between 2 and 10 mils.

After the second coat dried, a roll of one-half mil polyethylene film cling-modified by the addition of a monoglyceride of a fat-forming fatty acid was positioned in the carton in the manner shown in the drawings and sheets of the film were withdrawn and severed on the cutting bar in the manner commonly employed with dispensing cartons of this type. As each sheet was severed, the new leading edge was held securely to the vinyl spots and the spots functioned satisfactorily until the roll of film was exhausted.

EXAMPLE II

The procedure of example I was followed using a roll of one-half mil polyethylene film possessing static cling characteristics. The spots functioned satisfactorily until the roll was exhausted.

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EXAMPLE III

The procedure of example I was followed using a roll of 1 mil cling-modified polyethylene film. The spots functioned satisfactorily until the roll was exhausted.

EXAMPLE IV

Three $\frac{1}{4}$ " \times 1" tabs of extruded high gloss vinyl film were secured by a double-faced tape at spaced intervals proximate to the cutter bar of a dispensing carton of the type shown in the drawings. Sheets of one-half mil polyethylene film displaying autocling but containing no cling-modifiers were dispensed from the carton in the usual manner. The tabs held the leading edge of the film securely after each sheet was torn and continued to function satisfactorily until the supply roll was exhausted.

The dispensing cartons described above are of the type commonly used for dispensing sheet material in the home. Many modifications of the basic carton design have been made to accommodate larger supply rolls, e.g. 1,000 feet, for institutional use. The teachings of the present invention are equally applicable to these institutional cartons since such cartons are subject, to a greater or lesser degree depending on the particular design employed, to the difficulties associated with the use of household dispensing cartons.

Likewise, while this invention has been described with reference to many specific details thereof, it is not intended that the invention should be limited to such details.

I claim:

1. A dispensing carton for a roll of sheet material comprising a container having a bottom, front, rear and end walls, a cover hingedly connected to the rear wall forming an elongated aperture between the cover and the front wall for withdrawing sheet material from a supply roll positioned within the container, cutting means in association with the container positioned at the juncture of said bottom and said

front wall, and means positioned on the front wall of the container proximate to the cutting means for detachably adhering the sheet material thereto.

2. A dispensing carton in accordance with claim 1 wherein the sheet material is a polymeric film exhibiting cling characteristics and the adhering means on the container is a spot of a substance to which the polymeric film will cling.

3. A dispensing carton in accordance with claim 1 wherein the sheet material is waxed paper and the adhering means on the container is a spot of a pressure sensitive adhesive.

4. A dispensing carton in accordance with claim 1 wherein the sheet material is aluminum foil and the adhering means on the container is a spot of a pressure sensitive adhesive.

5. A dispensing carton in accordance with claim 1 wherein the sheet material is coated freezer paper and the adhering means on the container is a spot of a pressure sensitive adhesive.

6. A dispensing carton in accordance with claim 1 wherein the sheet material is polymeric film exhibiting no cling characteristics and the adhering means on the container is a spot of a pressure sensitive adhesive.

7. A dispensing carton in accordance with claim 2 wherein the polymeric film is polyethylene film and the substance to which the polymeric film will cling is a vinyl lacquer.

8. A dispensing carton in accordance with claim 2 wherein the polymeric film is polyethylene film and the substance to which the polymeric film will cling is a vinyl resin exhibiting cling characteristics.

9. A dispensing carton in accordance with claim 2 wherein the polymeric film is polyethylene film and the substance to which the polymeric film will cling is a vinyl spot adhesively secured to the carton.

10. A dispensing carton in accordance with claim 2 wherein the polymeric film is a cling-modified polyethylene film and the substance to which the polymeric film will cling is a lacquer of a copolymer of vinyl chloride and vinyl acetate.

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EXHIBIT 3:
U.S. Patent 5,524,515 to Boda (hereinafter, “**Boda**”)



US05524515A

United States Patent [19]

Boda

[11] Patent Number: 5,524,515

[45] Date of Patent: * Jun. 11, 1996

[54] SUPPORT PANEL FOR A ROTARY PAPER CUTTER

[75] Inventor: James C. Boda, Merrimac, Wis.

[73] Assignee: Fiskars Oy Ab, Helsinki, Finland

[*] Notice: The portion of the term of this patent subsequent to Jun. 21, 2011, has been disclaimed.

[21] Appl. No.: 262,308

[22] Filed: Jun. 20, 1994

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 68,399, May 28, 1993, Pat. No. 5,322,001.

[51] Int. Cl.⁶ B62D 1/18; B62D 7/02

[52] U.S. CL. 83/455; 83/456; 83/485; 83/522.11; 83/564; 83/588; 83/614

[58] Field of Search 83/455, 485, 614, 83/456, 489, 522.11, 578, 564, 588

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5,322,001	6/1994	Boda	83/455 X

Primary Examiner—Eugenia Jones

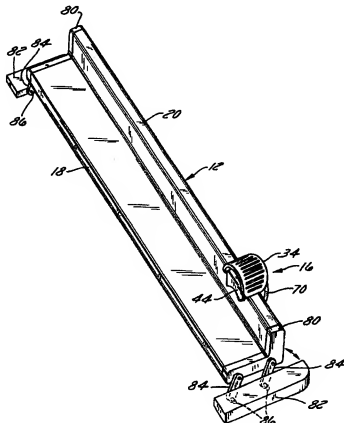
Attorney, Agent, or Firm—Foley & Lardner

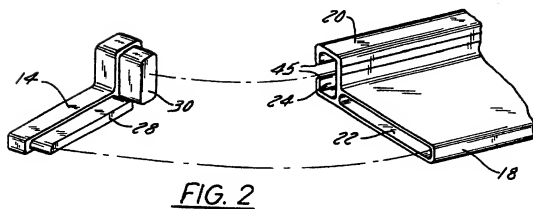
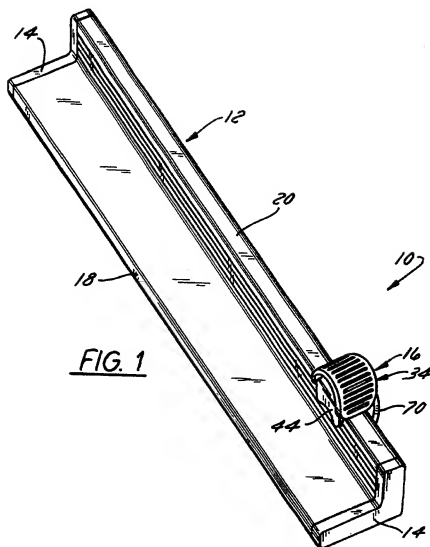
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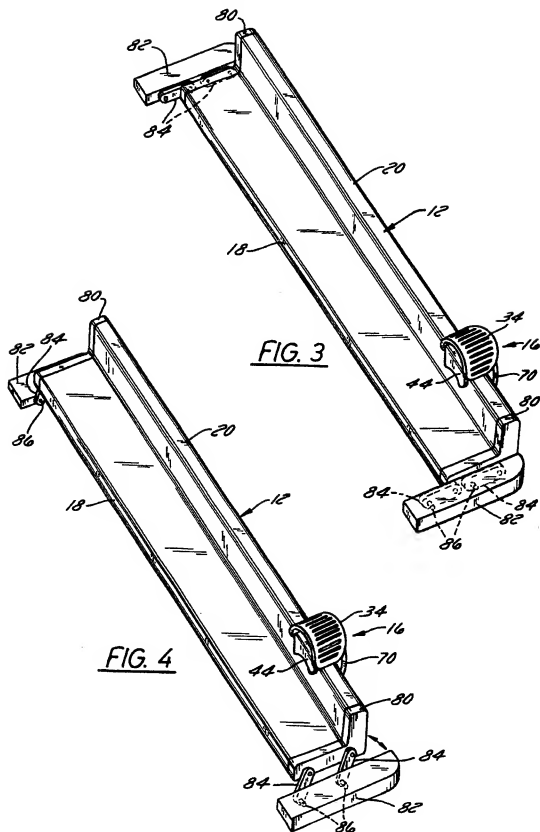
ABSTRACT

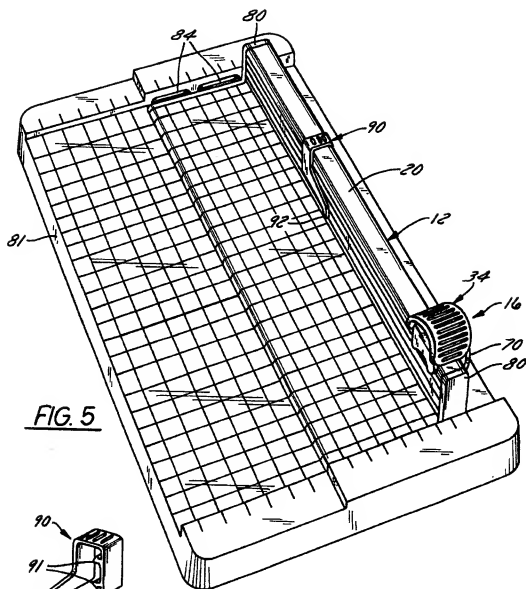
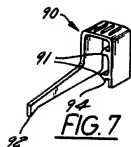
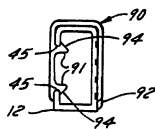
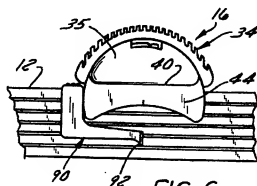
A paper cutter assembly having an extruded rail assembly including a base and a rail formed at right angles to each other. A carriage assembly is mounted on the rail for translational movement across the rail. End blocks are provided in each end of the rail assembly for pivotally connecting the rail assembly to guide blocks for pivotal movement between operative and inoperative positions with respect to the paper.

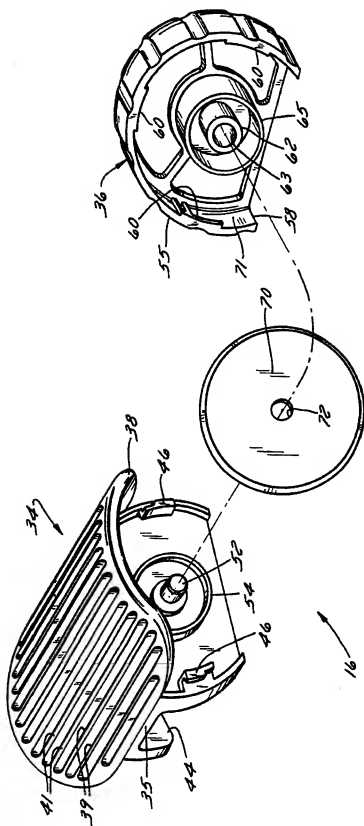
3 Claims, 5 Drawing Sheets

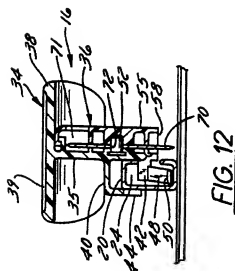
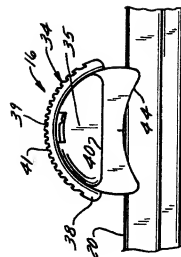
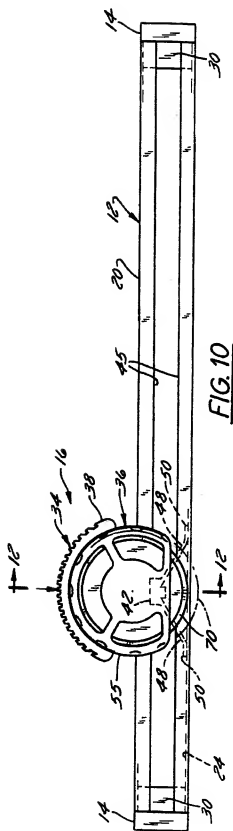






FIG. 5FIG. 7FIG. 8FIG. 6

FIG. 9



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SUPPORT PANEL FOR A ROTARY PAPER CUTTER

RELATED APPLICATION

This application is a continuation-in-part of application Ser. No. 08/068,399, filed May 28, 1993, U.S. Pat. No. 5,322,001, issued on Jun. 21, 1994, for "Paper Cutter With Circular Blades."

FIELD OF THE INVENTION

This invention relates to paper cutting devices and more particularly to a reinforced rail for supporting a rotary cutting blade carriage assembly mounted for translational movement on the rail assembly.

BACKGROUND OF THE INVENTION

My earlier filed patent application Ser. No. 08/068,399, filed on May 28, 1993, was concerned with a carriage assembly which is mounted on a rail for translational movement across a cutting board to cut or trim various material. The rail is mounted for pivotal motion with respect to the cutting board to raise the carriage assembly above the paper sheets to allow for placement of the paper sheets to be cut. A circular blade is mounted in the carriage assembly for rotational motion of the circular blade as it passes over the paper sheets. The carriage assembly is biased to an inoperative position on the rail when not in use. The carriage assembly is pushed down to move the blade into engagement with the stack of paper and then moved across the rail to cut or trim the paper. A self healing pad may be provided beneath the carriage assembly and moved across the rail to cut or trim the paper. The rail assembly provides sufficient structural strength to maintain the carriage assembly in a straight line for up to twelve inches. However, the rail cannot maintain a straight line when cuts of longer length are required.

SUMMARY OF THE PRESENT INVENTION

The present invention is concerned with a reinforced rail assembly for a rotary cutter blade assembly which can be used to cut paper strips of a width or length greater than twelve inches. In this regard the reinforced rail assembly can be used independently to support a carriage assembly which can be placed on the top of a stack of paper to cut the full length of the rail assembly. A self healing pad may be placed beneath the stack of paper when cuts of greater depth than the exposed portion of the blade are to be made. The reinforced rail assembly can be adapted to be mounted for pivotal movement above a supporting surface to allow for the placement of a stack of paper to be cut.

One of the primary features of the invention is the ability to use the rail assembly independently of a cutting board.

Another feature of the invention is the provision for a carriage stop which is mounted on the rail assembly to indicate the length of cut being made in the paper.

Other principal features and advantages of the invention will become apparent to those skilled in the art upon review of the following drawings, the detailed description and the appended claims.

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BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the rail assembly according to the present invention with a carriage assembly mounted on the rail assembly with a pair of end blocks mounted on the ends of the rail assembly;

FIG. 2 is a perspective view showing the configuration of the end blocks mounted in each end of the rail assembly;

FIG. 3 is a perspective view of the rail assembly shown pivotally connected to a pair of support blocks;

FIG. 4 is a view similar to FIG. 3 showing the rail assembly pivoted to the upper position;

FIG. 5 is a perspective view showing the rail assembly mounted for pivotable movement on a cutting board;

FIG. 6 is a partial view of the rail assembly with a pointer shown mounted on the rail assembly in alignment with the periphery of the cutting blade;

FIG. 7 is a perspective view of the arrow on the pointer;

FIG. 8 is a view taken on line 8-8 of FIG. 5 showing the mounting of the pointer on the rail assembly;

FIG. 9 is an exploded perspective view of the carriage assembly;

FIG. 10 is a front view of the carriage assembly shown mounted on the rail assembly;

FIG. 11 is a back view of the carriage assembly mounted on the rail assembly; and

FIG. 12 is a cross sectional view taken on line 12-12 of FIG. 10.

Before explaining at least one embodiment of the invention in detail it is to be understood that the invention is not limited in its application to the details of construction and the arrangement of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments or being practiced or carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein is for the purpose of description and should not be regarded as limiting.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The paper cutter 10 according to the present invention as shown in FIGS. 1 and 2 generally includes a rail assembly 12 having an end block 14 mounted in each end. A carriage assembly 16 is shown mounted on the rail assembly 12 for translational movement across the rail assembly. In accordance with the present invention the rail assembly includes a unitary base 18 and rail 20 which are arranged at a right angle to each other. The rail assembly is in the form of a right angle extrusion which is provided with an opening 22 throughout its length. The angular relation of the rail 20 to the base 18 provides a rigid structure throughout its length which allows the rail assembly to be extended to a length of 24 inches or more. The ends of the rail assembly are closed by end blocks 14 having bosses 28 and 30 which matingly engage with the openings 22 and 24, respectively, at each end of the rail assembly.

The carriage assembly 16 as shown in FIGS. 9, 10, 11 and 12 includes a trolley 34 and a cover 36. An arcuate flange 38 is provided around the upper edge of a body 35 which terminates at a ledge 40. The flange 38 includes a series of slots 39 forming ribs 41 to provide a surface which can be easily grasped by the operator.

A flange 44 depends from the ledge 40 downward to form a space to accommodate the upper portion of rail 24. A pair of leaf springs 48 are mounted on a support member 42 below the flange 44 which extend outwardly and downwardly therefrom. The ends 50 of the springs 48 are in the form of pads which slide across the inside of the rail 20. The leaf springs 48 may be formed as an integral part of the support member of independent metallic springs mounted thereon. The front side of the body 35 includes a pin 52 essentially located in the face of the body 35 and surrounded by a circular support surface 54. A set of three L shaped flanges 46 are molded on the perimeter of the front of the body 35. The cover 36 is in the form of a semi circular housing 55 having a flange 58 around the outer perimeter. The number of tabs 60 corresponding to the number of flanges 46 on the trolley are located around the edge of the flange 58. A hub 62 having a blind bore 63 is provided in the center of the housing 55. A circular ridge 65 is formed around the hub 62 which forms a recess 71 between the ridge 65 and the ridge 58. On assembly the cover 36 is rotated far enough for the tabs 60 to clear the flanges 46. The pin 52 is aligned with the hole 63 in the trolley 34 and the cover rotated to interlock the tabs 60 with the flanges 46.

A rotary cutting blade 70 is mounted in the housing and includes a center opening 72. The blade 70 is mounted on the pin 52 in abutting engagement with support surface 54. When the cover 36 is mounted on the trolley 34 it should be noted that the recess 70 provided around the periphery of the ridge 65 accommodates the cutting blades 70.

The trolley 34 is mounted on the rail 20 by sliding the leaf springs 48 into the opening 24 in the rail with the flange 44 aligned with the outside of the rail 20. One of the cutting blades 70 is mounted on pin 52 and the cover 36 mounted on the trolley 34. In operation the paper sheets are aligned with the edge of the rail. The trolley 34 is pressed down on the paper as shown in FIG. 10 to engage and cut the edge of the paper. The trolley 34 is then pushed across the rail assembly 12. The blade 70 will roll across the paper trimming the edge of the paper sheet. When released the springs 48 will bias the trolley 34 upward to clear the blade from the paper.

Referring to FIGS. 3 and 4 a second form of rail assembly 12 is shown having end blocks 80 mounted on each end of the rail assembly 38 which are pivotally connected to guide blocks 82 by means of pivot plates 84. Each pivot plate 84 has one end pivotally connected to the end block 80 and the other end connected to the guide block 82 by pins 86. With this arrangement the rail assembly can be pivoted to a horizontal position with the base located in a parallel relation to the paper while aligning paper sheets underneath the rail assembly. The rail assembly is then pivoted downward with the base seated on the paper sheets for cutting by the carriage assembly.

Referring to FIG. 5 the rail assembly 12 is shown mounted on a cutting board 81 by means of pivot plates 84 as described above. The rail assembly 12 can be pivoted to an upper position in order to align the paper with the edge

of the cutting board 81 and then lowered into engagement with the paper. In this embodiment a mat may be provided in the cutting board 81 as disclosed in the prior application Ser. No. 08/068,399 to allow for the carriage assembly to be moved across the rail to cut the paper.

An alignment marker 90 as shown in FIGS. 7 and 8 is mounted on the rail assembly 12 to provide a stop in the cut being made in the paper. As shown in FIG. 6 the marker 90 includes an alignment arrow 92 which is located on a line drawn tangent to the edge of the blade and parallel to the rail to indicate the end of the cut being made by the blade. The marker 90 includes a pair of guide ledges 91 which form hooks 94 to engage the edges 44 of the slot in the rail. The marker can be aligned at any point on the rail to indicate the length of the cut to be made in the paper.

Thus, it should be apparent that there has been provided in accordance with the present invention a support panel for a rotary paper cutter that fully satisfies the objectives and advantages set forth above. Although the invention has been described in conjunction with specific embodiments thereof, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art. Accordingly, it is intended to embrace all such alternatives, modifications and variations that fall within the spirit and broad scope of the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A paper cutter assembly comprising a rail assembly including a base and a hollow rail, the base and rail are formed at a right angle to each other, means for pivotally mounting said rail assembly for movement between operative and inoperative positions with respect to a stack of paper, said means comprising first and second end blocks and first and second guide blocks, said first end block mounted on one end of the rail assembly and said second end block mounted on the other end of the rail assembly, said first guide block pivotally connected to said first end block and said second guide block pivotally connected to said second end block to maintain a parallel relation between the rail assembly and the stack of paper, and a carriage assembly mounted for translational movement across the rail, the carriage assembly including a rotary cutter blade and a pair of leaf springs formed on the carriage assembly and mounted in the rail for biasing said carriage assembly upward to a neutral position on the rail.

2. The assembly according to claim 1 wherein said means further includes a first pair of pivot plates pivotally connected to said first end block and said first guide block and a second pair of pivot plates pivotally connected to said second end block and said second guide block whereby said rail assembly can be elevated to align paper sheets under the rail assembly.

3. The assembly according to claim 1 including a marker slidably mounted on said rail and having an arrow on one side of the rail to indicate the end of the cut made by the blade.

* * * * *

EXHIBIT 4:
U.S. Patent 4,210,043 to Urion et al. (hereinafter,
“Urion”)

- [54] CUTTING ASSEMBLY
 [75] Inventors: Kenard E. Urion, Woodbury, N.J.;
 Douglas R. Clemshaw, Tully, N.Y.

[73] Assignee: Scott Paper Company, Philadelphia, Pa.

[21] Appl. No.: 959,853

[22] Filed: Nov. 9, 1978

[51] Int. Cl.² B26D 7/14

[52] U.S. Cl. 83/175; 83/374;

83/455; 83/456

[58] Field of Search 83/175, 18, 20, 455,
 83/456, 614, 454, 374

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3,222,972	12/1965	Fulton	83/364
3,277,760	10/1966	Keene et al.	83/455
3,370,497	2/1968	Busse	83/455

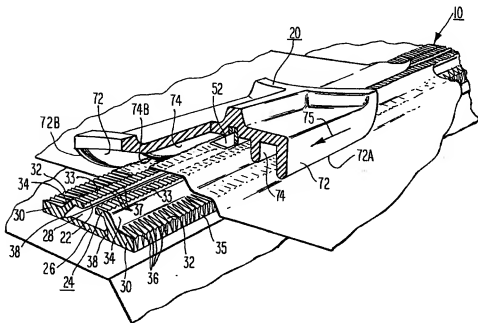
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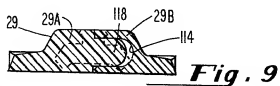
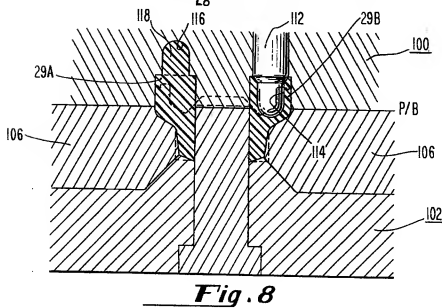
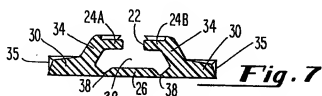
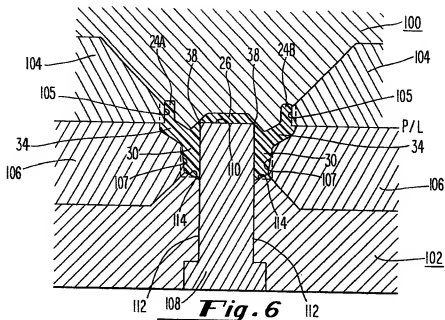
Primary Examiner—Frank T. Yost
 Attorney, Agent, or Firm—Martin L. Faigus; William J. Foley

[57] ABSTRACT

A cutting assembly of the type usable for severing a sheet into discrete elements includes an elongate track member having an elongate slot therein. A cutter slide is moveable in the slot and includes downwardly extending projections for both immobilizing and tensioning the sheet locally prior to, and during the severing operation. A method of forming the track, other articles having a segmented upper wall, by injection molding side sections and upper wall segments at an angle relative to the position they assume in the completed article, and thereafter rotating the side sections and upper wall segments about flexible, injection molded hinge sections to complete the formation of the article.

16 Claims, 9 Drawing Figures





CUTTING ASSEMBLY

TECHNICAL FIELD

This invention relates to a cutting assembly, and more particularly to a cutting assembly of the type employing a cutter slide moveable within a slot of an elongate track to sever sheet material into desired lengths. In addition the invention relates to a method of forming the track as a one-piece member.

BACKGROUND ART

It is often desirable to package sheet materials in roll form, and to provide a cutting mechanism for severing the sheets into desired lengths; depending upon intended use. It is quite common to package such rolls in cartons that are intended to be disposed of after the rolls have been depleted. Obviously any cutting mechanism employed as part of such a carton must be sufficiently economical to manufacture to justify its disposal along with the package. Although inexpensive mechanisms, such as serrated cutting bars, are known, they generally are not capable of accurately and easily cutting strong flexible sheet materials of the type that tend to stretch or flex as they are being subjected to a cutting force. Moreover, in the case of serrated cutting bars, it is quite easy for a person handling the package to inadvertently cut himself.

Although other types of cutters have been disclosed for use on boxes or cartons in which roll materials are packaged, a need does exist for improved low cost cutters which can be easily fabricated, which are reliable and safe in operation, and which are capable of cutting a wide variety of different sheet materials; particularly those that are strong, stretchable and flexible.

One prior art approach to cutting flexible sheet materials is to include the cutting element on a moveable assembly that has rotatable elements, such as wheels, to press the sheet material against a stationary plate or track for locally immobilizing the material as it is being cut. These devices have been found to work quite well; however, they are believed to be too expensive for the limited use encountered on packages of disposable products. The following patents disclose representative devices of the type employing rotatable elements as part of the cutter: U.S. Pat. Nos. 1,745,476 (Cohn); 2,503,353 (Pugh); 3,277,760 (Keene et al.); 3,463,040 (Fouilloux) and 3,791,246 (Lambiris).

A different type of cutting assembly employs a clamping arrangement that is operated independently of a sliding cutter to immobilize the sheet prior to the cutting operation. In this type of device the clamping action is achieved between a stationary surface and a hinged, moveable surface. The use of relatively moveable clamping elements increases the overall cost and complexity of the cutting assembly, as compared to assemblies in which separate clamping bars, independent of the cutter slide, are not utilized. The following patents disclose representative devices of the type employing moveable clamping elements: U.S. Pat. Nos. 3,142,217 and 3,370,497 (Busse) and 3,222,972 (Fulton).

A fairly simple cutting assembly is disclosed in U.S. Pat. No. Re 22,565, issued to Gillanders et al. This device is designed for use in cutting adhesive tape, and employs a cutter knife that is adapted to move along an elongated slot in a cylindrical bore. A handle is secured to the upper end of the knife to aid in moving the knife along the slot, and the handle is provided with laterally

spaced-apart wings to prevent accidental contact of the blade by the user. The wings also are employed to press the adhesive surface of the tape against a bead adjacent the slot to adhesively attach the tape to said bead. Although this cutter may be suitable for immobilizing adhesive tape by pressing its adhesive surface against the guide in which the knife is slid, there is no mechanism, either provided or suggested, for adequately immobilizing non-adhesive sheet materials during a cutting operation.

An improvement over the Gillanders et al construction has been invented by Balbir Singh and Ernest M. Pinhak, and is disclosed in co-pending U.S. Pat. application Ser. No. 959,359, entitled "Cutting Assembly", and filed on even date herewith. In the Singh et al assembly a top surface of a track is roughened, and a cutter slide, moveable in the track, includes an extremely smooth stationary lower surface overlying the roughened track surface to press the sheet material to be cut against said roughened track surface as the cutting operation is performed. Although this type of system represents a very economical approach to immobilizing non-adhesive sheet materials during a cutting operation, it may not provide the desired degree of immobilization and tensioning for reliably cutting extremely strong and stretchable sheets.

Applicants' cutting assembly is an improvement over that disclosed in the Singh et al patent application.

In order to economically manufacture the cutting assembly it is highly desirable to form it of a minimum number of components. To this end it is highly desirable to be able to form the elongate track as a single unit, and in a form that will permit the cutter slide to be mounted and retained within an interior compartment thereof.

It is known to mold two sections of an article as a single unit with a hinge section between them to permit the sections to be moved together to form a closed interior compartment, as is exemplified in U.S. Pat. No. 3,834,007, issued to Lambiris. In order to mold an elongate track or article having a split upper wall capable of defining a slot that communicates with an interior compartment, the split upper wall sections should initially be moldable in an opened position to permit insertion of the cutter slide. This type of forming technique is not suggested by Lambiris. Thereafter, the upper wall sections should be moveable into, and retained in the position they assume in the final track configuration to both trap the cutter slide in the interior compartment and form the slot in which the cutter slide is moveable. Clearly this type of forming technique is not suggested by Lambiris.

The instant invention relates to a simple and reliable cutting assembly, and to a unique method that can be employed to form, as a one-piece unit, the track of the cutting assembly.

DISCLOSURE OF INVENTION

This invention relates to a cutting assembly of the type employing an elongate track and a cutter slide moveable within a slot of the track. The cutter slide is free of elements that move relative to each other during the cutting operation, and includes a cutting element having a cutting edge for severing a sheet into desired discrete lengths when the sheet is draped over the slot in the track. More specifically, the cutter slide includes a top wall overlying the cutting element. This top wall includes first means directed downwardly therefrom for

forcing a section of the sheet against the track as the cutter slide is moved to thereby locally immobilize the sheet prior to the severing operation. Moreover, the top wall includes second means directed downwardly for engaging the immobilized sections of the sheet, as the cutter slide is moved, to tension the sections to be cut into a taut condition over the slot in the track prior to the severing operation. Thus, in accordance with this invention, separate means are employed to immobilize and tension the sheet, respectively, prior to severing. Moreover, this occurs locally in the region where the cutting operation is being performed, and without providing any cutter slide elements that are moveable relative to each other during the cutting operation. In fact, the cutter slide is provided by a series of injection molded parts that are connected together in nonmoving relationship to each other, and that are adapted to secure and retain the cutting element(s) with it.

As a second aspect of this invention a unique method is employed to form a one-piece member having an internal compartment defined in part by a bottom wall, side sections joined to said bottom wall and a split upper wall formed in two segments; each segment being a continuous extension of one side section. In this regard reference throughout this application to "bottom", "upper", "side" and "end" are intended to describe relative, rather than absolute positions.

The method of this invention is useable to form the elongate track of the cutting assembly. When molding the track, the segments of the split upper wall will be dimensioned so that they will be spaced from each other to provide the elongate slot in which the cutter slide is moveable, and also to provide the upper wall of an interior compartment in which the slide is retained.

In accordance with the method of this invention the bottom wall and side sections of the one-piece member are injection molded with the side sections at an angle relative to the bottom wall. The bottom wall is joined to the side sections through thin, flexible hinge sections. The upper wall segments of the members are integrally injection molded with respective side sections, and at an angle relative to their orientation in the completed article. When forming the elongate track, the upper wall segments preferably are molded at an angle of substantially 90 degrees to the position they will assume when the track is ready for use. Thus, as initially molded, the interior compartment of the track is opened up to permit a lower enlarged section of the cutter slide to be positioned in it. Thereafter, the side sections and upper wall segments of the track are rotated through substantially 90 degrees about the thin flexible hinge sections to complete the formation of said track.

Opposite ends of the track, or other one-piece article, preferably are formed in two separate segments, each segment forming a continuous extension of a respective upper wall segment. Like the upper wall segments, the end segments are injection molded in a position angularly related to the position they will assume in the completed article, and are moved into their assembled and operative positions by rotation of the side sections about their hinged connection to the bottom wall. Most preferably one end segment at each end of the one-piece member is provided with a male connector, and the other end segment is provided with a female connector. These male and female connectors are adapted to cooperate with each other, after the end segments have been rotated about the flexible hinge sections to their operative position, to retain the unitary member in said opera-

tive orientation with the split upper wall overlying at least a part of the bottom wall.

It is an object of this invention to provide a cutting assembly which is economical to construct and reliable in operation.

It is a further object of this invention to provide a cutting assembly employing a cutter slide moveable in an elongate track, wherein the cutter slide is free of elements that move relative to each other during the cutting operation.

It is a further object of this invention to provide a cutting assembly which simply and reliably immobilizes and tensions sections of the sheet as they are being cut.

It is a further object of this invention to form a one-piece member having an internal compartment defined, in part, by a continuous bottom wall and a split upper wall.

It is a further object of this invention to form a one-piece member having an internal compartment closed at least at its bottom, ends and sides, and including a split upper wall.

It is a further object of this invention to provide a method of forming a one-piece member, in the form of an elongate track, having an internal compartment defined in part by a continuous bottom wall and a split upper wall, wherein the split upper wall defines an elongate slot in which a cutter slide of the cutting assembly is moveable.

Other objects and advantages of this invention will become apparent by referring to the detailed description of the best mode of this invention, taken in connection with the drawing.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is an isometric view showing the cutting assembly of this invention mounted on a box in which sheet material to be cut is packaged;

FIG. 2 is a fragmentary, isometric view of the cutting assembly of this invention with parts of the cutter slide broken away to show details of construction;

FIG. 3 is a sectional view taken along line 3-3 of FIG. 1;

FIG. 4 is a sectional view taken along line 4-4 of FIG. 3;

FIG. 5 is a sectional view taken along line 5-5 of FIG. 3;

FIG. 6 is a cross-sectional view through an injection mold showing the arrangement of cavities employed to form the region of the elongate track illustrated in FIG. 3;

FIG. 7 shows the section of the track molded in FIG. 6, but in its final orientation after being pivoted into a closed condition;

FIG. 8 is a cross-sectional view through the injection mold showing the arrangements of cavities for molding the closed elongate ends of the track; and

FIG. 9 is a sectional view taken along line 9-9 of FIG. 1, depicting the closed orientation of the elements that are molded in FIG. 8.

BEST MODE FOR CARRYING OUT THE INVENTION

Referring to FIG. 1, the cutting assembly 10 of this invention is employed to sever a sheet or web 12 into discrete sections along a cut line 14. In the illustrated embodiment the sheet to be cut is packaged in roll form in a box 16 to which the cutting assembly 10 is attached.

Referring to FIGS. 1 and 2, the cutting assembly 10 includes a track 18 and a cutter slide 20. The cutter slide is movable within an elongate slot 22 provided through a centrally located upper wall 24 of the track. The upper wall 24 is spaced vertically above a centrally located bottom wall 26 to aid in defining an interior compartment 28 in which the cutter slide 20 is trapped. The slot 22 and the interior compartment 28 are closed at the opposite ends 29 of the track (FIGS. 1 and 9) to prevent the slide from being slid out of engagement with said track.

Referring to FIG. 2, the track 18 also includes marginal sections 30 having upper surfaces 32 spaced below upper surfaces 33 of the centrally located upper wall 24. These marginal sections 30 are interconnected to the upper wall 24 through opposed sloping sections 34 that also provide sidewalls of the interior compartment 28.

Referring to FIGS. 2 and 3, elongate side surfaces 35 of the track and the elongate upper surfaces 32 of the marginal sections 30 are serrated, or grooved along a major portion of their elongate dimensions to provide a series of spaced-apart points 36 along the outer side edges of the track 18. These points cooperate with sections of the cutter slide 20 to aid in immobilizing the sheet to be cut, prior to and during cutting, in a manner which will be described in detail hereinafter. The upper surfaces 33 of the centrally located upper wall 24 also are serrated along a major portion of their elongate dimension to provide a series of spaced-apart points 37 along the opposed edges of the slot 22. These points 37 cooperate with the cutting elements to immobilize the sheet closely adjacent the cut line in a manner that will be explained in greater detail later in this application.

As can be seen best in FIGS. 2 and 3, spaced-apart thin zones 38 interconnect the centrally located bottom wall 26 to end marginal section 30 of the track 18. The purpose of these thin zones 38 will be described in greater detail hereinafter in connection with the method of manufacturing the track. When the track is in its operative condition, as shown in FIGS. 2 and 3, the lower surfaces of the bottom wall 26 and marginal sections 30 lie in the same horizontal plane. These surfaces are adhesively secured, or otherwise fastened to an outer sidewall of the box 16 adjacent a sheet dispensing opening underlying a flap 39 (FIG. 1).

Referring to FIGS. 3-5 the cutter slide 20 includes a top member 40 connected to a blade retainer 42. The retainer is formed by opposed male and female sections 44 and 46, respectively, and includes a central web section 48 extending through the elongate slot of the track 18, and an enlarged flange section 50 within the interior compartment 28 of said track. The enlarged section 50 underlies the centrally located upper wall 24 on opposite sides of the elongate slot 22 to prevent the cutter slide 20 from being pulled out of the track.

As can be seen best in FIG. 4, two blades 52 and 54, having obliquely oriented cutting surfaces 56 and 58, respectively, are secured to the blade retainer 42 for cutting the web 12 when the cutter slide is moved in either direction within the slot 22 of the track. The blades are connected to the retainer by positioning male projections 60 associated with the male section 44 through respective openings 62 provided in the blades 52 and 54, and then into projection-receiving openings 64 in the female section 46. Both of the male projections 60 are identical in construction; each including an annular groove 66 formed adjacent an end thereof (FIG. 3). The openings 64 provided in the female section 46 also

are identical; each including an annular rib 68 for engaging the annular groove 66 associated with the male projection it receives to thereby lock the male and female sections of the retainer together (FIG. 3). The blade retainer 42, after it has been assembled, is secured within an elongate recess 70 formed in the underside of the slider top 40. This securement can be achieved by employing an adhesive substance, or, most preferably, by ultrasonic bonding.

Referring to FIGS. 2-5 the slider top 40 has a unique construction that cooperates with the track 18 to provide the desired benefits of this invention. Specifically, the slider top 40 includes a pair of downwardly directed outer rails, or projections 72 that are spaced outwardly of, but close to the spaced-apart points 36 formed at the junction of the upper surface 32 and the side surface 35 of each of the marginal sections 30. These projections 72 include lower, horizontally extending surfaces 72A located below the upper surfaces 32 of the marginal sections 30. As the slide 20 is moved these lower horizontally extending surfaces force the sheet 12 against the spaced-apart points 36 to thereby locally immobilize said sheet.

The slider top 40 further includes a pair of downwardly directed inner rails, or projections 74 spaced inwardly of the outer rails 72; closer to the cutting blades 52 and 54. Referring to FIG. 3, the inner projections 74 include lower, horizontally extending surfaces 74A located above the horizontally extending surfaces 72A of the outer rails 72.

As can be seen best in FIGS. 2 and 5, opposite ends 72B of the outer rails 72 are generally curved, and extend beyond generally curved outer ends 74B of the inner rails 74. These curved ends prevent the rails 72 and 74 from snagging the sheet 12 as they guide said sheet into engagement with the lower, horizontally extending surfaces 72A and 74A of said rails.

As can be seen best in FIG. 4 the cutting edges 56 and 58 of the blades 52 and 54, respectively, are located inwardly of the inner rails 74 to permit both the outer rails 72 and the inner rails 74 to provide their desired interaction with the sheet 12 and the track 18 prior to commencing the cutting operation. Moreover, the arrangement of the inner and outer rails of the slider top 40, in conjunction with the track 18, makes the blades 52 and 54 inaccessible to contact during normal usage.

In operation the cutter slide 20 will locally immobilize and tension the sheet 12 prior to the cutting operation, and will maintain the immobilized and tensioned condition of the sheet during said cutting operation. Specifically, as the cutter slide 20 is moved along the track, for example in the direction of arrow 75 in FIG. 2, the sheet 12 first will be engaged by the lower horizontally extending surfaces 72A of the outer rails 72. The sheet will be guided into engagement with these lower surfaces by the curved ends 72B. The lower surfaces 72A will force the sheets into engagement with the spaced-apart points 36 provided at the junction between the upper surface 32 and side surface 35 of each marginal section 30 to initially immobilize the sheet over the elongate slot 22. Thereafter the sheet will be engaged by the lower surfaces 74A of the inner projection 74. Since the sheet will already have been impaled, or immobilized over the points 36 at the time the lower surfaces 74A of the inner rails engage the sheet, these lower surfaces 74A will act to tension said sheet across the elongate slot 22. The inner projections 74 are spaced to vertically overlie the sheet 12 in a region

between the points 36 and the centrally located upper track wall 24 to force the sheet downwardly, and thereby accomplish this tensioning function. Since the lower horizontal surfaces 74A of the inner projection 74 extend beyond the cutting edges of the blades 52 and 54, the tensioning operation will take place prior to the cutting operation. In addition, since both sets of rails 72 and 74 are aligned with the blades and extend beyond the cutting surfaces in both directions, the immobilizing and tensioning functions will be provided during the cutting operation. Moreover, due to the oblique orientation of the cutting edges 56 and 58, the sheet 12 will be forced downwardly into the track slot during the cutting operation (FIG. 3) to locally immobilize the sheet against the spaced points 37 close to, and on opposite sides of the cut line 14 (FIG. 1). This improves the cutting action by minimizing the tendency for the sheet to be buckled, or plowed, rather than be cut when exposed to the horizontal force component imposed on the sheet by the cutting blades 52 and 54.

The cutting assembly 10 of this invention can be employed advantageously to cut many different types of sheet materials. However, the greatest benefits can be achieved by employing this cutting assembly to sever sheets that are strong, flexible and elastic. It is these latter types of sheets which generally tend to be plowed, rather than be cut by the cutting blade, unless they are adequately maintained in an immobilized, taut condition over the track slot as the cutting operation is performed. The present invention achieves both the immobilizing and tensioning functions in an economical and reliable manner by, in part, employing a cutter slide that does not rely upon relatively movable parts, such as rolls and belts, to aid in the cutting operation.

All sections of the cutting assembly 10, with the possible exception of the blades 52 and 54, can be molded out of a suitable plastic material, such as an acetal resin, in an economical manner. Because the cutting assembly is an economical, low cost item, it is economically feasible to employ the assembly on boxes housing roll materials that are intended to be disposed of after the roll has been spent. Although the preferred embodiment of this invention employs the cutting assembly 10 on a box housing a roll of web material, the cutting assembly 10 can be employed in other environments wherein high quality, low cost cutting applications are desired.

Referring to FIGS. 6-9, the track 18 is injection molded as a single unit in a unique manner. Specifically, the track is molded with the interior compartment 28 thereof in an opened condition, and, after the cutter slide 20 is properly positioned relative to said interior compartment, the track is bent, or pivoted into its closed position about the spaced-apart thin zones 38 to thereby trap the cutter slide within said interior compartment (FIG. 3).

FIG. 6 shows the cavity configuration established between the upper and lower mold sections 100 and 102 for molding the region of the track in which the elongate slot 22 is provided, such as the region shown in FIG. 3. These mold sections are separable along a parting line, P/L, to permit removal of the track after the injection molding operation.

The upper mold section 100 is provided with laterally spaced-apart inserts 104 having inwardly facing, grooved surfaces 105 for forming the serrations in the upper surfaces 33 of upper wall segments 24A and 24B. These segments, in the completed track assembly, coop-

erate to define the centrally located upper wall 24 having the elongate slot 22 therethrough (FIG. 7).

The lower mold section 102 is provided with laterally spaced-apart inserts 106 having inwardly facing grooved surfaces 107 to form the serrations in the upper surfaces 32 of the marginal track sections 30. The lower mold section also includes an insert, in the form of a plug 108. This plug includes a horizontally disposed top surface 110 and side surfaces 112 disposed 90° to said top surface for cooperating in defining cavities in which the centrally located bottom wall 26 and marginal sections 30 of the track are formed. Specifically, the plug 108 cooperates with opposed surfaces in the upper mold section 100 to define a cavity region in which the centrally located bottom wall 26 is formed, and also, a thin cavity region in which the thin zones 38 are formed to continuously join the bottom wall 26 to the marginal sections 30. The lower mold section 102 includes upwardly facing surfaces 114 closely adjacent the side surfaces 112 of the plug 108, and these upwardly facing surfaces are grooved to form the serrations in the side surfaces 35 of the track.

In the preferred method of this invention the marginal sections 30, sloping sections 34 and centrally located upper wall segments 24A and 24B of the track are all molded 90° to the positions they are required to assume in the completed track assembly illustrated in FIG. 7. In fact, only the centrally located bottom wall 26 is molded in the position it assumes in the completed track assembly.

It should be apparent that the cutter slide 20, after it has been completely assembled, can be mounted with the track 18 by positioning the enlarged bottom flange 50 thereof adjacent the centrally located bottom wall 26 of the track, when the track is in its opened orientation illustrated in FIG. 6. In this condition the upper wall segments 24A and 24B are oriented 90° to the position they will assume in the completed track assembly to permit the enlarged bottom flange 50 to be placed in the region of the centrally located interior compartment 28 of the completed track assembly. Thereafter, the track can be bent, or pivoted about its flexible thin zones 38 into the configuration shown in FIG. 7 to trap the flange 50 within the interior compartment 28, as can be seen best in FIG. 3.

As described earlier, the elongate ends 29 of the track 18 are closed to prevent the cutter slide 20 from being slid out of the elongate slot 22 when said slide is moved to the opposite ends of said slot. The manner in which the closed ends are molded can be seen best in FIG. 8. It should be understood that each of the ends 29 are molded in the same manner. As can be seen in FIG. 8, the thin, hinged zones 38 do not extend to the opposed ends 29 of the track. However, the ends 29 are molded in two segments 29A and 29B that are oriented 90° to the position they are required to assume in the completed track assembly. A male plug member 112 is retained in the upper mold section 100 for forming a female cavity 114 in one of the ends and segments 29B. The upper mold section 100 also includes a cavity section 116 for forming a male projection 118 associated with the other end segment 29A. The inserts 106 in the lower mold section, in the region of the end margins 29, do not need to include grooves in them to form serrations in the upper surfaces of the marginal track sections 30, since the cutting of the sheet takes place inwardly of these marginal ends. It should be clear from FIGS. 8 and 9 that the end sections 29, like the central region of

the track, are moved into a closed condition only after the track has been pivoted about the elongate, spaced-apart thin zones 38.

The above-described arrangement for integrally molding the track 18 as a one-piece unit permits the formation of a slot, or narrow opening 22, through an upper wall 24 to cooperate with an undercut interior compartment 28 that is closed at the opposed ends of said track. Although the molding technique has been described in connection with the formation of the elongate track 18 of this invention, it is within broader aspects of the method invention to form other one-piece members having a central, or interior compartment defined in part by a continuous bottom wall and a split upper wall. In this regard the split upper wall can be formed of segments that are spaced apart to define a slot or opening, or alternatively, the segments can butt against each other to form a completely enclosed compartment.

Although the invention has been described with a certain degree of particularity, it is understood that the present disclosure has been made only by way of example, and that numerous changes in the details of construction and in the combination and arrangement of parts may be resorted to without departing from the scope of the invention.

We claim:

1. A cutting assembly of the type usable for severing a sheet into discrete elements, said assembly including:
 - a) an elongate track member having an elongate slot therein; and
 - a) a cutter slide movable in said slot, said cutter slide including first means for forcing sections of the sheet against the track on opposite sides of the slot to immobilize said sheet, and second means for engaging the sheet on opposite sides of the slot to tension immobilized sections of said sheet prior to severing.
2. A cutting assembly of the type usable for severing a sheet into discrete elements, said assembly including:
 - a) an elongate track member having upper wall segments terminating in spaced-apart inner surfaces that define an elongate slot between them;
 - a) a cutter slide movable in said slot and including a cutting element having a cutting edge for engaging and severing the sheet when said sheet is positioned over the slot in a taut condition, the improvement wherein the cutter slide includes:
 - a top wall overlying the cutting element;
 - first means directed downwardly from the top wall for forcing sections of the sheet against the track on opposite sides of the slot as the cutter slide is moved to locally immobilize said sheet;
 - second means directed downwardly from the top wall for engaging immobilized sections of the sheet on opposite sides of the slot as the cutter slide is moved to tension said sections into a taut condition over the slot;
 - said first and second downwardly directed means being aligned with the cutting edge for maintaining the sections of the sheet immobilized and tensioned prior to and during the severing of said sections.
3. The cutting assembly of claim 2 wherein the first downwardly directed means includes a first pair of outer projections that are laterally spaced-apart on opposite sides of the cutting element, the second downwardly directed means includes a second pair of inner

projections that are laterally spaced-apart on opposite sides of the cutting element.

4. The cutting assembly of claim 3 wherein the first pair of projections extend beyond the second pair of projections in the elongate direction of severing, whereby sections of the sheet are immobilized prior to being tensioned.

5. The cutting assembly of claim 4 wherein the cutting element is positioned intermediate opposed ends of the first and second pairs of projections.

6. The cutting assembly of claim 5 wherein the cutting element includes oppositely directed cutting edges for permitting the sheet to be severed by moving the cutter slide in either elongate direction.

7. The cutting assembly of claim 3 wherein the elongate track includes substrate impaling surface means along opposed elongate outer edges thereof, said first pair of projections extending laterally beyond said outer edges for forcing the substrate against the impaling means to aid in the immobilization function.

8. The cutting assembly of claim 7 wherein the upper wall segments of the track that define the elongate slot are disposed above the elongate outer edges of the track that include the substrate impaling surface means.

9. The cutting assembly of claim 8 wherein the second pair of projections extend downwardly from the top wall a shorter distance than the first pair of projections, said second pair of projections being spaced laterally outwardly of the upper wall segments that define the slot, and inwardly of the outer edges that include the impaling surface means.

10. A method of forming a one-piece member having a compartment defined in part by a bottom wall, side sections joined to said bottom wall and a split upper wall formed in two segments, each of said segments being joined to one of said side sections; said method including the steps of

- (a) molding the side sections at an angle to the bottom wall and joined to said bottom wall through thin, flexible hinge sections;
- (b) molding both upper wall segments as continuous extensions of respective side sections and at angles relative to their required orientation in the completed member, one upper wall segment and its associated side section being joined to the bottom wall through one flexible hinge section and the other upper wall segment and its respective side section being joined to the bottom wall through the other flexible hinge section; and
- (c) rotating the side sections and upper wall segments about the flexible hinge sections to move the upper wall segments into overlying relationship with at least a portion of the bottom wall.

11. The method of claim 10 wherein the step of pivoting the molded part is carried out to move lower surfaces of the side sections into substantially the same plane as the lower surface of the bottom wall.

12. The method of claim 10 wherein the molding steps set forth in paragraphs (a) and (b) are carried out by injection molding.

13. The method of claim 10 including the formation of closures at opposite ends of the compartment, each of said closures being formed in two segments, said method including molding each segment as a continuous extension of one of the upper wall segments and at an angle relative to the position it assumes in the completed member said segments closing opposite ends of the compartment after carrying out step (c).

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14. The method of claim 13 including the steps of molding a first connector as part of one segment of each end closure and molding a second connector as part of the other segment of each end closure, said first and second connectors being adapted to cooperate with each other to aid in retaining the member in its completed orientation after carrying out step (c).

15. The method of claim 13 including molding the end segments of the end closures and the upper wall

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segments forming the split upper wall at an angle substantially 90° to the position they assume in the completed manner.

16. The method of claim 15 including molding the upper wall segments so that they will be spaced from each other in the completed manner to form a narrow slot communicating with the compartment.

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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 4,210,043

DATED : July 1, 1980

INVENTOR(S) : Kenard E. Urion et al

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Delete claims 10-16.

On the title page "16 Claims" should read

-- 9 Claims --.

Signed and Sealed this

Third Day of August 1982

[SEAL]

Attest:

GERALD J. MOSSINGHOFF

Attesting Officer

Commissioner of Patents and Trademarks

EXHIBIT 5:
U.S. Patent 5,036,740 to Tsai (hereinafter, “**Tsai**”)

United States Patent [19]

Tsai

[11] Patent Number: 5,036,740

[45] Date of Patent: Aug. 6, 1991

[54] ROLLER-PRESSED FILM CUTTER APPARATUS

[76] Inventor: Chang-Ta Tsai, P. O. Box 55-1670, Taipei, Taiwan

[21] Appl. No.: 516,794

[22] Filed: Apr. 30, 1990

[51] Int. Cl.³ B26D 5/10

[52] U.S. CL 83/455; 83/614

[58] Field of Search 83/578, 614, 649, 454, 83/455, 505; 225/43

[56] References Cited

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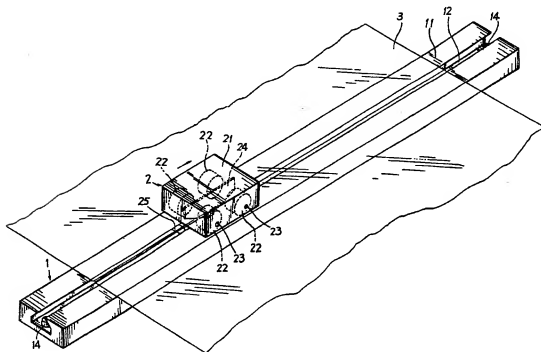
Primary Examiner—Z. R. Bilinsky

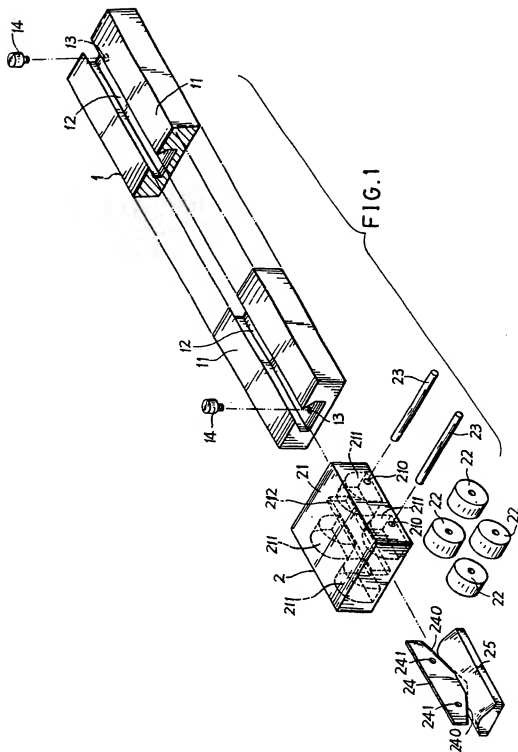
[57]

ABSTRACT

A film cutter includes a slide holder having four rollers rotatably mounted in the holder and rotatably moving on a track, a central cutting blade formed in a central portion under the holder, and a slide base secured with the cutting blade and positioned under the slide holder slidably engageable in a longitudinal groove formed in the track, whereby upon a pulling of a film across the track and upon a pushing of the slide holder, the rollers will press to tension the film against the track for stably, smoothly and quickly cutting the film as cut by the cutting blade secured between the upper slide holder and the lower slide base.

1 Claim, 3 Drawing Sheets





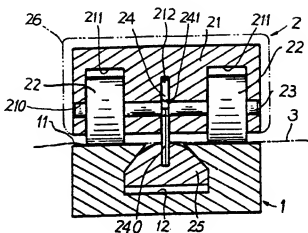


FIG. 2

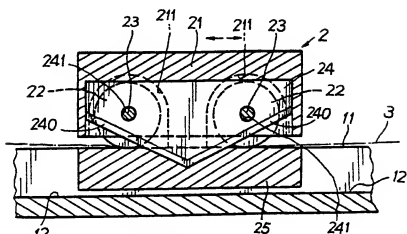


FIG.3

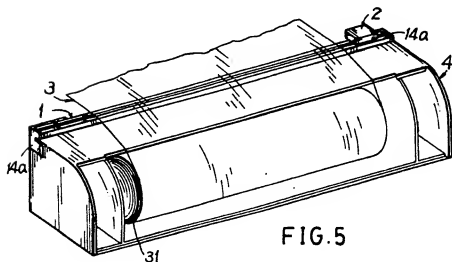
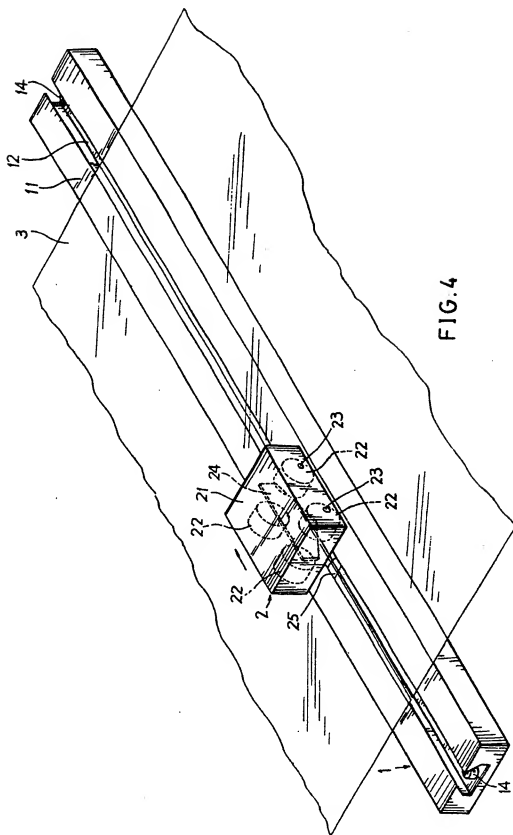


FIG.5



ROLLER-PRESSED FILM CUTTER APPARATUS

BACKGROUND OF THE INVENTION

Singh et al. disclosed a traveling cutter assembly in their U.S. Pat. No. 4,197,774 for severing a sheet into desired length, which however may have the following drawbacks:

1. Even the sheet to be severed is locally immobilized against the edges 36 of the groove ridges 34 for minimizing the tendency of the sheet to be buckled or plowed when cut by the cutting blades 36, the serrations 32, 34 may slow down the sliding movement of the cutter slide 20 on the track 10.

2. For making the V-shaped grooves 32 and the upper ridges 34 of the track 10, the production cost thereof will be increased.

3. If using the cutter having such V-shaped grooves 32 and upper ridges 34 for cutting a very thin film such as a wrap film, the film when pressed between the slide 20 and the upper surface 30 of the track 10 may still be wrinkled or plowed to influence a packing appearance of a sophisticated or precious present or article wrapped with the wrinkled film.

The present inventor has found the drawbacks of such a conventional cutter and invented the present roller-pressed film cutter apparatus.

SUMMARY OF THE INVENTION

The object of the present invention is to provide a film cutter apparatus including a cutter means slidably moving on a track means having a plurality of rollers rotatably mounted in the cutter means and rotatably pressing on a film against the track means to stabilize and facilitate the film cutting operation by the cutter means.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded view showing all elements in construction of the present invention.

FIG. 2 is a cross sectional view of the cutter means of the present invention.

FIG. 3 is a longitudinal sectional drawing of the cutter means of the present invention.

FIG. 4 is an illustration showing a cutting operation of the present invention.

FIG. 5 is an illustration showing an assembly of the present invention on a casing stored with a wrap film roll.

DETAILED DESCRIPTION

As shown in FIG. 1-4, the present invention comprises: a track means 1 and a cutter means 2 slidably mounted on the track means 1. The track means 1 may be fixed on an upper surface of a casing 4 stored with a wrap film roll 31 in the casing 4 so that a wrap film 3 can be directly pulled outwardly from the casing 4 to be cut by the cutter means 2 slidably held on the track means 1 as shown in FIG. 5. However, the casing 4 as shown herewith is not claimed and limited in this invention. The wrap film 3 to be cut in this invention may be selected from a very thin film such as PVC, PE or other plastic films either transparent or opaque. The present invention may also be used for cutting sheet, cloth, paper or other film-like materials.

The track means 1 includes a longitudinal flat surface 11 formed on the upper surface of the track means 1, a dovetail-shaped longitudinal groove 12 longitudinally

recessed in the longitudinal flat surface 11, and two stoppers 14 fixed in two end holes 13 respectively formed on two opposite end portions of the track means 1. The stopper 14 may be substituted with an ending plate 14a as shown in FIG. 5 for limiting the reciprocative sliding movement of the cutter means 2.

The cutter means 2 includes: a slide holder 21 having a plurality of sockets 211 recessed in its bottom portion, a plurality of rollers 22 rotatably mounted in the sockets 211 each roller 22 pivotally secured to the holder 21 around a pin 23 fixed into a pin hole 210 laterally formed through the holder 21, and a central cutting blade 24 fixed in a slide base 25 secured to and positioned under the holder 21.

The cutting blade 24 of the cutter means 2 has its lower portion fixed into the slide base 25 and has its upper portion inserted into a slot 212 longitudinally formed in a central portion in the holder 21. The blade 24 is formed with two pin holes 241 to be fixed with the pins 23 passing through the holes 210 formed in the holder 21 and formed with two sloping cutting edges 240 on both front and rear ends of the blade 24 for cutting the film 3. The rollers 22 are symmetrically disposed on two opposite sides of the central cutting blade 24.

The slide base 25 of the cutter means 2 is slidably engageable with the dovetail shaped longitudinal groove 12 of the track means 1 and has a cross section generally shaped as a triangular or dovetail shape, snugly engageable with the groove 12. For facilitating the sliding movement of the cutter means 2 in the track means 1, a lubricating oil or grease may be filled in the groove 12 for lubricating purpose.

When using the present invention for cutting a wrap film 3, the film 3 is pulled across the flat surface 11 of the track means 1 and the holder 21 of the cutter means 2 is pushed and depressed by the user to rotate the rollers 22 for moving the cutter means 2 on the track means 1 and to press the rollers 22 against the film 3 and the flat surface 11 of the track means 1, thereby tensioning the film 3 in situ and cutting the film smoothly and quickly.

The present invention has the following advantages superior to a conventional cutter assembly:

1. The cutter means 2 as provided with the rollers 22 may tension the film 3 to be cut in situ during the cutting operation and may facilitate the rolling sliding movement of the cutter means 2 on the track means 1 for a quicker cutting operation.

2. Since the track surface 11 is so flat and the rollers 22 of the cutter means 2 are rolling on the film 3 and the track means 1, the film even made so thin will not be wrinkled or plowed during the cutting processing.

3. The elements in construction of the present invention are not complex in their structure so that the production cost can be greatly reduced and their maintenance problems can also be minimized.

The number of the rollers 22 of the cutter means 2 are not limited in this invention, but are preferably four rollers 22 rotatably mounted in the holder 21 for a stable, smooth running on the track means 1.

The blade 24, the base 25 and the holder 21 may also be integrally formed by molding process wellknown in plastic molding processes. As shown in FIG. 2, a cover 26 may be provided to encompass the holder 21 and the pins 23 within the cover 26 for shielding or decorative purpose or for marking purpose.

I claim:

1. A film cutter apparatus comprising:

a track means having a longitudinal flat surface formed on an upper surface of the track means and a longitudinal groove longitudinally recessed in the upper flat surface of the track means; and a cutter means slidably mounted on said track means having a central cutting blade fixed in said cutter means for cutting a film when pulled across the upper flat surface on said track means,

the improvement which comprises:

said cutter means including a slide holder having four rollers symmetrically disposed on two opposite sides of the central cutting blade rotatably mounted in said holder rotatably moving on said upper flat surface and pressing the film against the upper flat surface for a smooth film cutting operation, said

cutting blade fixed on a slide base slidably engageable in said longitudinal groove in said track means and secured to a bottom slot formed in the slide holder;

said four rollers rotatably mounted in four sockets formed in a bottom of said slide holder by two pins each pin fixed through each first pin hole laterally formed in said slide holder; said cutting blade formed with two second pin holes in said blade to be fixed with said two pins rotatably mounting the rollers in said slide holder; and

said longitudinal groove in said track means having a cross section of said groove formed as a dovetail shape engageable with the slide base of the cutter means, said slide base having a cross section thereof formed as a dovetail shape.

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EXHIBIT 6:
U.S. Patent 4,960,022 to Chaung (hereinafter, “**Chuang**”)

[54] **PLASTIC FILM CUTTER**

[76] **Inventor:** Kuo C. Chuang, 1 FL, No. 2, Alley 1,
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[21] **Appl. No.:** 319,769

[22] **Filed:** Mar. 7, 1989

[51] **Int. Cl.³** B26D 7/14; B26D 5/08;
B26D 7/00

[52] **U.S. Cl.** 83/175; 83/614;
83/649

[58] **Field of Search** 30/278, 279 R, 280,
30/282, 314, 299, 294, 290; 83/614, 175, 649

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Primary Examiner—Douglas D. Watts

Assistant Examiner—Paul M. Heyrana, Sr.

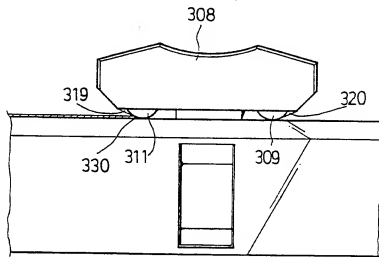
Attorney, Agent, or Firm—Schwartz & Weinrieb

[57]

ABSTRACT

A plastic film cutter comprising a supporting board with its two sides provided with a plurality of clamping plates, a sliding furrow is formed upon the top of the supporting board for supporting the lower sliding seat of the slidable cutting means, and a slidable cutting means with its lower sliding seat inserted into the sliding furrow. Upon the bottom surface of the upper push button of the cutting means, there provided rollers for engaging and maintaining the plastic film in a tensioned state, the blades for cutting the plastic film are inserted into a slit formed upon the upper surface of the lower sliding seat of the cutting means.

10 Claims, 4 Drawing Sheets



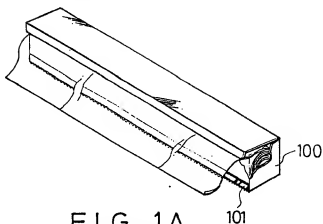


FIG. 1A
PRIOR ART

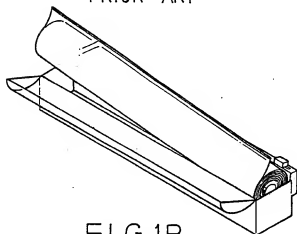


FIG. 1B
PRIOR ART

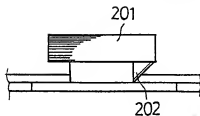


FIG. 2A
PRIOR ART

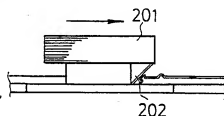


FIG. 2B
PRIOR ART

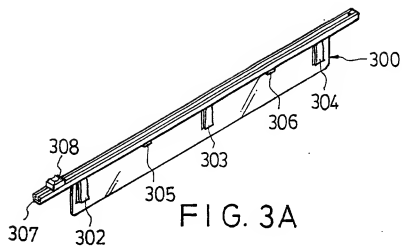


FIG. 3A

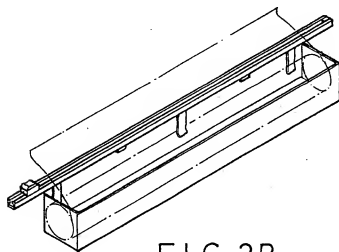


FIG. 3B

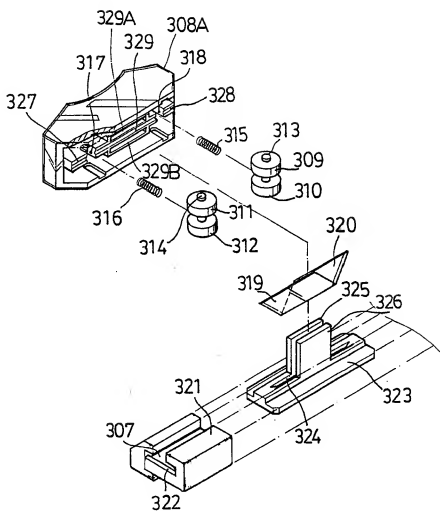


FIG. 3C

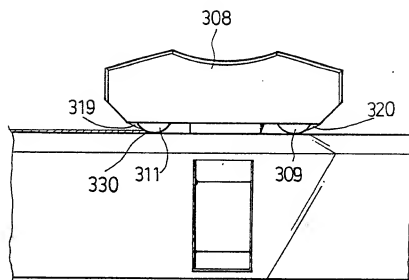


FIG. 3D

PLASTIC FILM CUTTER

FIELD OF THE INVENTION

This invention relates to the field of plastic film cutters particularly suited for clamping the film upon one side of the packing box of plastic film and which can cut the plastic film bidirectionally.

BACKGROUND OF THE INVENTION

The plastic films sold in the market for keeping food fresh are shown packaged as in FIG. 1A, wherein outside of the packing box 100, there is provided a strip of cutting teeth 101. In order to use the plastic film, people have to find the starting end of the roll of plastic film, pull the film outwardly to a predetermined proper length, cause the film to contact the cutting teeth 101, and then by using the cutting teeth, tear the film gradually. During such operation, if the people do not tear the film carefully, the plastic films are always torn in an irregular manner or they tend to stick together because of static electricity. This makes people very unpleasant and feel very frustrated, and besides, it is a waste of materials. Furthermore, it is very easy for people to injure their hands due to carelessness. In order to avoid the defects mentioned above, there is also provided or known a box having a sliding cutter for the plastic film, as shown in FIG. 1B. In order to use the plastic film, the roll of plastic film is firstly put into the storage box, however, after a long period of use, the inner space of the storage box will become very dirty and will stain the plastic film which was clean originally. Moreover, as shown in FIG. 2A, the cutting blade 202 upon the push button 201 of the cutting means disposed within the storage box is formed with one cutting edge at one side, such that the plastic film can only be cut in one direction. After one cutting operation is completed, the push button 201 has to be pushed back to its original position. Furthermore, as shown in FIG. 2B, the one-sided cutting blade 202 is inserted into the push button 201 with its cutting edge inclined inwardly so as to cut the plastic film. A resisting force tending to obstruct the cutting of the plastic film will therefore naturally be developed whereby the cutting end of the plastic film will be pushed downwardly and will tend to be gathered within the vicinity of the button by means of the cutting edge of the cutting blade 202. As a result, the plastic film has to be pulled tightly against the T-shaped furrow of the cutter. If the pulling force is not sufficient, the plastic film will be gathered as described before and cannot be properly cut.

Moreover, the size of the plastic film storage box with the sliding cutter as shown in FIG. 2A is fixed and not suited for plastic films with different sizes. This is also a defect of the improved plastic film storage box provided with a sliding cutter.

OBJECT OF THE INVENTION

In view of the above mentioned defects faced by users, it is an object of this invention to provide a plastic film cutter by which the cutter will clamp itself to one side of the storage box for the plastic film. Consequently, it can be used for many plastic films having different sizes and the plastic films will be maintained clean.

SUMMARY OF THE INVENTION

According to the plastic film cutter of this invention, there are rollers disposed upon the bottom surface of the push button cutting means. Therefore, the plastic film will be pressed and pulled tightly for easily and smoothly cutting, the same such being another object of the present invention.

According to the plastic film cutter of this invention, because the plastic film will be pressed and pulled tightly during the cutting operation, the plastic film will not gather at the bottom of the cutting blade, it is very comfortable to use the cutter of this invention, and this is a further object of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

A more complete understanding of these and other features and advantages of the present invention will become apparent from a careful consideration of the following detailed description of certain embodiments illustrated in the accompanying drawings, in which like reference characters designate like or corresponding parts throughout the several views, and wherein:

FIGS. 1A and 1B are perspective views showing plastic film roll storage boxes with conventionally known cutting means.

FIGS. 2A and 2B are side views showing the structure of the cutter of the conventional of plastic film roll storage box.

FIG. 3A is a perspective view showing a fully assembled embodiment of the invention.

FIG. 3B shows a common method for using the present invention.

FIG. 3C is an exploded perspective view showing the components of the invention.

FIG. 3D shows the cutting means of the present invention in use.

DETAILED DESCRIPTION OF THE INVENTION

The structures and the defects of the conventional plastic film storage box as shown in FIGS. 1A, 1B and FIGS. 2A, 2B are described above.

As shown in FIG. 3A, the main part of the present invention is a supporting board 300, upon the two sides of which, there are a plurality of clamping plates 302, 303, 304; 305, 306. Between the supporting board 300 and each of the clamping plates, there is defined a gap for holding the side wall of any storage box for a plastic film roll (as shown in FIG. 3B). Upon the top edge of the supporting board 300, there is disposed a T shaped sliding furrow 307, a slidable cutting means 308 being slidably disposed within the sliding furrow 307. In order to cut the plastic film, it is simply needed to pull the free end of the plastic film and left it end be supported upon the top surface of the furrow. If a person then presses the upper surface of the push button 308A of the cutting means with a finger tip and pushes the button sliding inside the T shaped sliding furrow 307 from one end to another, then the plastic film will be cut apart from the plastic film roll for covering the foods or the like. It can cut the plastic film bi-directionally, and is very convenient to use.

Referring to FIG. 3C, on the bottom surface of the upper push button 308A of the cutting means 308, there are disposed rollers 309, 310, 311, 312 for keeping the plastic film in a tensioned or flat state, each of the two rollers being disposed upon the same axle 313 or 314

respectively, each of the two axle then being inserted into a holding seat 317 or 318 with a spring 315 or 316 being disposed interiorly of the pushbutton housing. The elastic forces of the springs will then act upon the rollers, so as to engage the plastic film by directly engaging the axles 313, 314. At the same time, when the inclined cutting edges of the cutting blades 319, 320 cut into the plastic, film the rollers will engage the plastic film and tension the same because the rollers are engaged upon the upper face 321 of T-shaped sliding furrow 307. The plastic film will be held tight upon the upper surface 321 of T-shaped sliding furrow 307, and the cutting operation will be effected very well, whereby the plastic film will not gathered at the bottom of the cutting blade 319 or 320. In addition, upon each of the two ends of the T-shaped furrow 307, there is disposed a stopper 322 extending upwardly with a very small height, the upper surface of at least one of the stoppers 322 being inclined outwardly so as to enable the sliding seat 323 of the cutting means 308 to be inserted into the T-shaped furrow 307, such that after the sliding seat 323 of the cutting means 308 is pushed into the T-shaped sliding furrow, the cutting means 308 will not slide out of the furrow 307. The blades 319, 320 are inserted into the slit 324 formed within the sliding seat 323 of the cutting means 308, the outer sides of the blades then being supported by means of the clamping walls 325, 326 formed upon the sliding seat 323 respectively. As the pressing plate 329 formed at the center part of the bottom of button 308A is inserted into the gap formed between the clamping walls 325, 326, the pressing plate 329 will contact the upper edges of the blades 319, 320 and the other plates 329A, 329B, formed laterally outwardly of the pressing plate 329 engage the clamping walls 325, 326 so as to clamp the blades 319, 320 therebetween. In addition the stoppers 327, 328 formed inside the push button 308A will also press the blades 319, 320 downwardly so as to hold the blades 319, 320 fixed at their positions and prevent the blades 319, 320 from moving horizontally when the plastic film is being cut.

Referring to FIG. 3D, it can be clearly seen that the position where the blade 319 or 320 cuts the plastic film 330 is located upon the same lateral or transverse line as the position where the rollers 311, 312 engage the plastic film 330, such that the plastic film is pulled tight as it is being cut by means of the blade 319 or 320. As a result, no resistance is developed as the cutting is performed, the plastic film 330 will not gather at the bottom of the cutting edge of the blade 319, or 320, and besides, after one section of the plastic film is cut apart from the film roll by means of the blade 319, the push button 308A of cutting means 308 need not necessarily be pushed to its original position because people can use the blade 320 with its inclined cutting edge to perform another cutting operation. It is very convenient and exhibits effects which the conventional plastic film cutter did not have.

Although the present invention has been described with a certain degree of particularity, the present disclosure has been made by way of example and changes in details of structure may be made without departing from the spirit thereof.

I claim:

1. A plastic film cutter, comprising:
a means housing a supply of plastic film to be cut;
a furrow fixedly supported within the vicinity of said housing means and including an upper surface

upon which a portion of said plastic film may be supported during a cutting operation;

a cutting means, including at least one cutting blade, slidably supported upon said furrow for cutting said plastic film during movement of said cutting means along said furrow from one end portion of said furrow to another end portion of said furrow; and

roller means, disposed within said cutting means and upon opposite sides of said at least one cutting blade, for engaging said plastic film disposed upon said upper surface of said furrow so as to rollably support said cutting means upon said furrow and to maintain said plastic film in a tensioned state while said at least one cutting blade cuts said plastic film.

2. A plastic film cutter as set forth in claim 1, wherein: said means housing said supply of plastic film is a box container; and

said supply of plastic film comprises a roll of plastic film disposed within said box container.

3. A plastic film cutter as set forth in claim 2, further comprising:

a support board fixedly supporting said furrow along one edge portion of said support board; and
clamping means mounted upon said support board for clamping said support board to a sidewall portion of said box container.

4. A plastic film cutter as set forth in claim 1, wherein: said furrow includes a substantially T-shaped slot defined within the vicinity of said upper surface thereof; and

said cutting means includes a substantially T-shaped base portion for slidable movement within said substantially T-shaped slot defined within said furrow.

5. A plastic film cutter as set forth in claim 4, further comprising:

stopper means disposed at opposite ends of said slot for retaining said cutting means within said furrow.

6. A plastic film cutter as set forth in claim 4, wherein: said base portion of said cutting means includes two laterally spaced, upstanding wall portions having a gap defined therebetween for housing said at least one cutting blade.

7. A plastic film cutter as set forth claim 6, wherein: said cutting means further includes an upper push-button type housing;

a central plate is provided within said housing for engaging an upper surface of said at least one cutting blade so as to maintain said at least one cutting blade between said upstanding wall portions of said base portion as a result of said central plate being accommodated within said gap defined between said upstanding wall portions; and

a pair of slots, defined upon opposite sides of said central plate within said housing, for accommodating upper portions of said upstanding wall portions of said base.

8. A plastic film cutter as set forth in claim 1, wherein: said cutting means includes two cutting blades, each one of said two cutting blades having a cutting blade surface disposed toward opposite end portions of said furrow whereby said cutting means comprises a bi-directional cutting means capable of cutting said plastic film when said cutting means is moved in either one of two directions along said furrow.

9. A plastic film cutter as set forth in claim 8, wherein:

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said roller means comprises two pairs of rollers, each pair of rollers being disposed upon opposite sides of a respective one of said cutting blades such that peripheral portions of said roller means which engage said plastic film are disposed within a common transverse plane along with portions of said cutting blades which engage said plastic film for cutting said plastic film whereby said plastic film

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will be maintained in said tensioned state by said roller means while said cutting blades cut said plastic film.

10. A plastic film cutter as set forth in claim 1, wherein:

said roller means comprises two pairs of rollers disposed at opposite ends of said cutting means.

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EXHIBIT 7:
U.S. Patent 5,398,576 to Chiu (hereinafter, “**Chiu**”)



US005398576A

United States Patent [19][11] **Patent Number:** 5,398,576**China**[45] **Date of Patent:** Mar. 21, 1995**[54] CUTTING DEVICE FOR A ROLL OF PROTECTIVE FILM**

[76] **Inventor:** Kuang-Wu Chin, No. 92, Se. 1, Chung-Cheng Rd., Tung-Kang Chen, Ping-Tung Hsien, Taiwan, Prov. of China

[21] **Appl. No.:** 209,000

[22] **Filed:** Mar. 9, 1994

[51] **Int. Cl.⁶** B26D 5/10

[52] **U.S. Cl.** 83/614; 83/455; 83/649

[58] **Field of Search** 83/455, 614, 649

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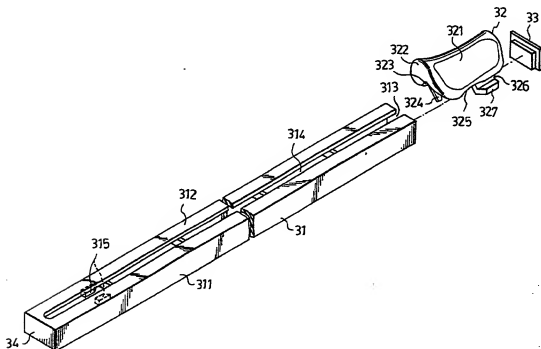
Primary Examiner—Richard K. Seidel
Assistant Examiner—Raymond D. Woods
Attorney, Agent, or Firm—Ladas & Parry

[57] ABSTRACT

A cutting device for a roll of protective film includes an

elongated positioning unit which has two side walls, a top wall interconnecting the top ends of the side walls so as to define a sliding space among the side and top walls, and a longitudinally extending slot formed through the top wall and communicated with the sliding space. A cutter includes a sliding body placed on the positioning unit and having a rear portion and a front portion which has a rearwardly and downwardly inclined front end surface and a notch formed in the bottom surface thereof. A blade is mounted in the notch and extends rearwardly and downwardly from the sliding body in such a manner that the cutting edge of the blade is aligned with the front end surface of the sliding body. A guide unit includes two vertical plates projecting downwardly from the rear portion of the sliding body through the slot of the positioning unit, and two horizontal plates that project outwardly from lower ends of the vertical plates. The length of the vertical plates is slightly longer than the thickness of the top wall of the positioning unit so that the front portion of the sliding body can turn somewhat upwardly to facilitate cutting of the protective film by the cutting edge of the blade.

3 Claims, 3 Drawing Sheets



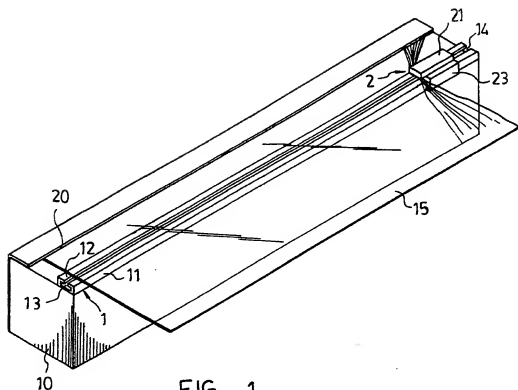


FIG. 1
(PRIOR ART)

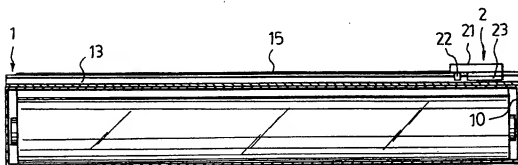


FIG. 2
(PRIOR ART)

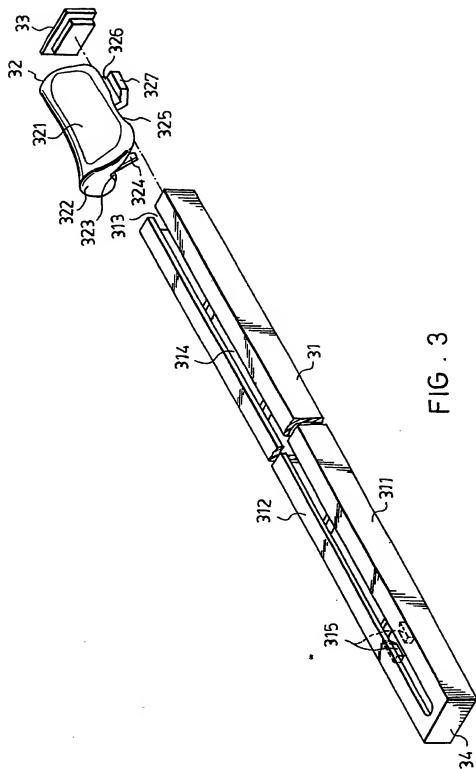


FIG. 5

CUTTING DEVICE FOR A ROLL OF PROTECTIVE FILM

BACKGROUND OF THIS INVENTION

1. Field of the Invention

This invention relates to a cutting device for a roll of protective film, more particularly to a cutting device which can conveniently and effectively cut a roll of protective film.

2. Description of the Related Art

This invention is an improvement of a conventional cutting device, shown in FIG. 1, which is used for cutting a roll of protective film 15 that is disposed within an elongated box 10. The cutting device includes a positioning unit 1 and a cutter 2 that is mounted slidably on the positioning unit 1. The box 10 has an elongated outlet portion 20 which is located at one of the sides of the top surface of the box 10 so as to permit pulling of the protective film 15 out of the box 10.

Referring to FIGS. 1 and 2, the positioning unit 1 includes two aligned and elongated vertical side walls 11 which are mounted securely on the other side of the top surface of the box 10 at the bottom ends thereof, an elongated horizontal top wall 12 which interconnects the top ends of the side walls 11 so as to define an elongated sliding space 13 between the side walls 11 and under the top wall 12, and a longitudinally extending slot 14 formed through the top wall 12 and communicated with the sliding space 13.

The cutter 2 includes a sliding body 21 which is disposed on the top surface of the top wall 12 of the positioning unit 1, a blade 22 (see FIG. 2) which is mounted vertically and securely on the bottom surface of the sliding body 21 and which extends through the slot 14, and a guide unit which includes a pair of vertical guide plates 23 (only one is shown) that are mounted respectively and securely on the bottom ends of two opposite side walls of the sliding body 21 and that extend downwardly along the outer surface of the respective side wall 11 of the positioning unit 1 so as to retain the cutter 2 on the positioning unit 1.

When it is desired to cut the protective film 15, a user has to draw one end of the protective film 15 from the outlet portion 20 of the box 10 and press the same against the top surface of the top wall 12 of the positioning unit 1. The blade 22 cuts the protective film 15 when the sliding body 21 is pushed along the slot 14 from one end to the other end of the latter. However, when the cutter 2 is in use, the guide plates 23 may touch the protective film 15 first and thus wrinkle the protective film 15, as shown in FIG. 1. Accordingly, it is difficult for the blade 22 of the cutter 2 to cut the wrinkled portion of the protective film 15. The conventional cutting device is thus inconvenient to use.

SUMMARY OF THIS INVENTION

The main objective of this invention is to provide a cutting device which is used to cut a roll of protective film and which can conveniently and effectively cut the same.

According to this invention, a cutting device which is used for cutting a roll of protective film includes a positioning unit and a cutter. The positioning unit has two aligned and elongated vertical side walls, an elongated horizontal top wall which interconnects the top ends of the side walls so as to define an elongated sliding space between the side walls and under the top wall, and a

longitudinally extending slot formed through the top wall and communicated with the sliding space. The cutter includes a sliding body which is placed on the top surface of the top wall of the positioning unit. The sliding body has a rear portion and a front portion which has a rearwardly and downwardly inclined front end surface and a notch that is formed in a bottom surface of the front portion. The cutter further includes a blade which is mounted securely on the sliding body in the notch and which extends rearwardly and downwardly from the sliding body in such a manner that the cutting edge of the blade is aligned with the front end surface of the front portion of the sliding body, and a guide unit which includes two vertical plates that project downwardly from the bottom surface of the rear portion of the sliding body through the slot of the top wall of the positioning unit, and two horizontal plates that project respectively and outwardly from the lower ends of the vertical plates under the top wall of the positioning unit. The slot of the top wall of the positioning unit is sized so as to prevent removal of the guide unit from the positioning unit. The length of the vertical plates is slightly longer than the thickness of the top wall of the positioning unit so that, when the cutting edge of the blade contacts the protective film, the front portion of the sliding body can turn somewhat upwardly to facilitate cutting of the protective film by the cutting edge of the blade.

BRIEF DESCRIPTION OF THE DRAWING

Other features and advantages of this invention will become apparent from the following detailed description of a preferred embodiment of this invention, with reference to the accompanying drawings, in which:

FIG. 1 is a perspective view of a conventional cutting device which is used for cutting a roll of protective film;

FIG. 2 is a schematic view illustrating the conventional cutting device;

FIG. 3 is an exploded view showing a cutting device of the preferred embodiment of this invention;

FIG. 4 is a schematic view of the preferred embodiment; and

FIG. 5 is a schematic view illustrating how the cutting device is operated so as to cut a roll of protective film in accordance with the preferred embodiment of this invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 4, a cutting device 3 of the preferred embodiment of this invention is used to cut a roll of protective film 51 that is disposed within an elongated box 5 in a known manner. The cutting device 3 is mounted securely on the top surface of the box 5 and includes a positioning unit 31 and a cutter 32.

Referring to FIG. 3, the positioning unit 31 has two aligned and elongated vertical side walls 311 (only one is shown) which are secured to the top surface of the box 5 (see FIG. 4) at the bottom ends thereof, an elongated horizontal top wall 312 which interconnects the top ends of the side walls 311 so as to define an elongated sliding space 313 between the side walls 311 and under the top wall 312, and a longitudinally extending slot 314 formed through the top wall 312 and communicated with the sliding space 313. The positioning unit 31 further includes an upright front stop plate 34 which is mounted securely on the front end portions of the side

and top walls 311, 312 of the positioning unit 31, and an upright rear stop plate 33 which is mounted removably on the rear end portions of the side and top walls 311, 312 of the positioning unit 31 so as to permit removal of the cutter 32 from the positioning unit 31.

Referring to FIGS. 3 and 4, the cutter 32 includes a sliding body 321 which is placed on the top surface of the top wall 312 of the positioning unit 31. The sliding body 321 has a rear portion and a front portion which has a rearwardly and downwardly inclined front end surface 322 and a notch 323 that is formed in the bottom surface thereof. The cutter 32 further includes a blade 324 which is mounted securely on the sliding body 321 in the notch 323 and which extends rearwardly and downwardly from the sliding body 321 in such a manner that the cutting edge of the blade 324 is aligned with the front end surface 322 of the front portion of the sliding body 321. A guide unit includes two vertical plates 326 that project downwardly from the bottom surface of the rear portion of the sliding body 321 through the slot 314 of the top wall 312 of the positioning unit 31, and two horizontal plates 327 that project respectively and outwardly from the lower ends of the vertical plates 326 under the top wall 312 of the positioning unit 31. The slot 314 of the top wall 312 of the positioning unit 31 is sized so as to prevent removal of the guide unit from the positioning unit 31, thereby retaining the cutter 32 on the positioning unit 31. The length of the vertical plates 326 is slightly longer than the thickness of the top wall 312 of the positioning unit 31. Accordingly, when the cutting edge of the blade 324 contacts the protective film 51 (see FIG. 4), the front portion of the sliding body 321 can turn somewhat upwardly so as to facilitate cutting of the protective film 51 by the cutting edge of the blade 324. The sliding body 321 of the cutter 32 further has a curved concave portion 325 on a bottom surface thereof between the blade 324 and the guide unit so as to prevent contact between the bottom surface of the sliding body 321 and the portion of the protective film 51 which has been cut off. Owing to being located at the rear portion of the sliding body 321, the guide unit of the cutter 32 can prevent wrinkling of the protective film 51 when the cutter 32 is in use so that the blade 324 can easily cut the protective film 51.

The positioning unit 31 further includes a pair of stop blocks 315 which are secured in the sliding space 313 of the positioning unit 31 near the front end portion of the side and top walls 311, 312 of the positioning unit 31. Accordingly, when the cutter 32 is in use, the stop blocks 315 can block respectively the horizontal plates 327 of the guide unit of the cutter 32 from forward movement, as shown in FIG. 5, thereby preventing the cutting edge of the blade 324 from colliding with the front stop plate 34.

With this invention thus explained, it is apparent that numerous modifications and variations can be made without departing from the scope and spirit of this in-

vention. It is therefore intended that this invention be limited only as indicated in the appended claims.

I claim:

1. A cutting positioning unit comprising: a positioning unit having two aligned and elongated vertical side walls, an elongated horizontal top wall which interconnects top ends of said side walls so as to define an elongated sliding space between said side walls and under said top wall, and a longitudinally extending slot formed through said top wall and communicated with said sliding space; and a cutter including a sliding body which is placed on a top surface of said top wall of said positioning unit, said sliding body having a rear portion and a front portion which has a rearwardly and downwardly inclined front end surface and a notch formed in a bottom surface thereof, said cutter further including a blade which is mounted securely on said sliding body in said notch and which extends rearwardly and downwardly from said sliding body in such a manner that a cutting edge of said blade is aligned with said front end surface of said front portion of said sliding body, and a guide unit which includes two vertical plates that project downwardly from the bottom surface of said rear portion of said sliding body through said slot of said top wall of said positioning unit, and two horizontal plates that project respectively and outwardly from lower ends of said vertical plates under said top wall of said positioning unit, said slot of said top wall of said positioning unit being sized so as to prevent removal of said guide unit from said positioning unit, said vertical plates having a length longer than a thickness of said top wall of said positioning unit so that, when said cutting edge of said blade contacts a material to be cut said front portion of said sliding body is capable of turning upwardly so as to facilitate cutting of the material by said cutting edge of said blade; said sliding body having a curved concave portion in the bottom surface thereof between said blade and said guide unit so as to prevent contact between said bottom surface of said sliding body and a portion of said material which has been cut-off.

2. The cutting positioning unit as claimed in claim 1, further comprising an upright front stop plate which is mounted securely on front end portions of said side and top walls of said positioning unit, and an upright rear stop plate which is mounted removably on rear end portions of said side and top walls of said positioning unit so as to permit removal of said cutter from said positioning unit.

3. The cutting positioning unit as claimed in claim 2, wherein said positioning unit further includes a pair of stop blocks secured in said sliding space of said positioning unit near said front end portions of said side and top walls of said positioning unit so that, when said cutter is in use, said stop blocks are capable of blocking respectively said horizontal plates of said guide unit of said cutter from forward movement to prevent said cutting edge of said blade from colliding with said front stop plate.

* * * * *

EXHIBIT 8:
Phthalate Reference

Notice of References Cited	Application/Control No. 09/741,521	Applicant(s)/Patent Under Reexamination VEGLIANTE ET AL.	
	Examiner SEAN M. MICHALSKI	Art Unit 3724	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-4,856,975	08-1989	Gearhart, Kerton	425/131.1
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)			
	U	"Phthalate Ester Plasticizers-Why and How They Are Used". P. R. Graham, Environmental Health Perspectives, Vol. 3, (Jan., 1973), pp. 8. Published by: The National Institute of Environmental Health Sciences (NIEHS).			
	V				
	W				
	X				

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Plasticizer Uses and Markets

No single plasticizer exhibits the perfect balance of properties for every application. Each end-use will demand certain essential properties. To achieve this balance some properties of lower importance must be sacrificed to some extent. In the judicious selection of the "proper" plasticizer system for a given application, the first consideration would be compatibility. Then, depending upon the specific application, other criteria relating to processing, performance, and permanence properties would be obtained. A partial checklist might be as shown in Table 1.

Table 1. Criteria relating to processing, performance, and permanence properties.

Processing	Performance	Permanence
Roll milling	Toxicity	Migration resistance
Calendering	Color	Volatility
Dry blending	Odor	Extraction resistance
Banburying	Flexibility	Outdoor aging
Extrusion	Softness	Light stability
Solution	Mechanical properties	Heat sensitivity
Foaming	Electrical properties	Fungal resistance
Heat sealing	Flame retardance	

It should also be remembered that for each application the desirable balance of properties must be achieved within a prescribed cost framework.

Table 2 lists selected performance criteria for a number of plasticizer types, including both branched-chain and linear phthalates. The results from the permanence property evaluations were obtained by using standard accelerated testing procedures. These data compare classes of products and are not meant to characterize individual plasticizers within these classes. The measurement for each property (H_2O extraction, volatility, oil resistance, and migration) is expressed in terms of per cent weight loss. Therefore, the higher the number, the poorer the performance. The low-temperature efficiency value is the temperature at which the modulus of rigidity is 135,000 psi, making those systems with the lowest values the most efficient in flexibilizing poly(vinyl chloride) at low temperatures. The room temperature modulus is the flexibility of the system at room temperature. Again, the lower the modulus, the better the performance is.

The adipates, being linear aliphatic esters, are used primarily for their plasticizing efficiency. They flexibilize poly(vinyl chloride) well at both room temperature and extremely low temperature. This efficiency is obtained at the expense of permanence. The aliphatic structure leads to poor hydrocarbon resistance, and the relatively low molecular weight causes high volatility. The

Table 2. Performance criteria for selection of plasticizers.*

	Permanence properties,				Efficiency	
	H_2O , %	Volatility, %	Oil, %	Migration %	Low temp, °C	R.T. modulus, psi
Adipate	0.10	14	70	21	-66	630
Phthalate (branched)	0.03	5	34	4	-39	830
Phthalate (linear)	0.02	2	44	2	-48	850
Phosphate ester	0.02	7	7	9	-39	700
Trimellitate	0.01	1	82	2	-42	850
Polymeric ester	0.10	2	2	0.4	-20	1300

* 40% plasticizer in PVC.

EXHIBIT 9:
U.S. Patent 4,856,975 to Gearhart (hereinafter,
“Gearhart”)

United States Patent [19]

Gearhart

[11] Patent Number: 4,856,975

[45] Date of Patent: Aug. 15, 1989

[54] COEXTRUSION BLOCK, ESPECIALLY FOR THE COEXTRUSION OF GENERALLY FLAT PVC ARTICLES, SUCH AS SIDING

[75] Inventor: Kenton Gearhart, Moundridge, Kans.

[73] Assignee: American Maplan Corporation, McPherson, Kans.

[21] Appl. No.: 237,211

[22] Filed: Aug. 26, 1988

[51] Int. Cl.⁴ B29C 47/04

[52] U.S. Cl. 425/131.1; 264/177.1; 425/133.1; 425/133.5; 425/462

[58] Field of Search 425/130, 131.1, 133.1, 425/133.5, DIG. 243, 462; 264/177.1, 177.17

[56] References Cited

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Primary Examiner—Jay H. Woo

Assistant Examiner—Timothy W. Heitbrink

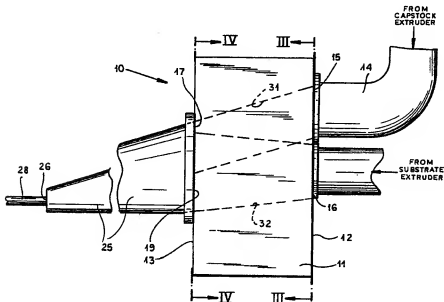
Attorney, Agent, or Firm—Herbert Dubno

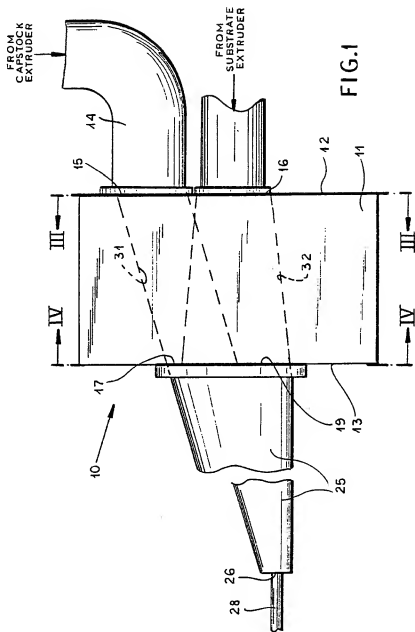
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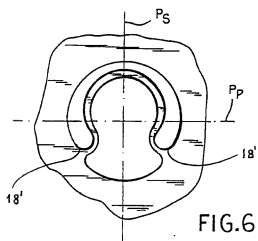
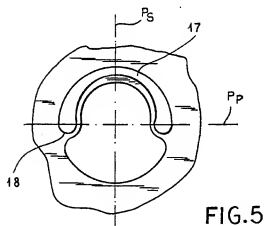
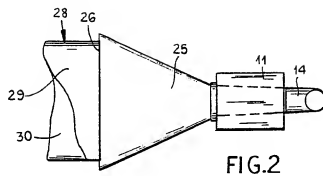
ABSTRACT

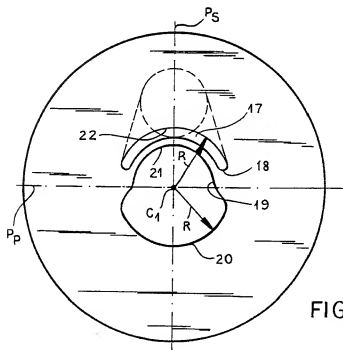
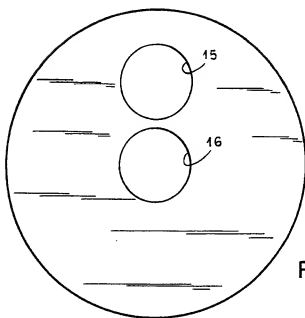
A coextrusion block for siding communicates through respective separate circular inlets with two extruders at the inlet side of the coextrusion block while, at the outlet side, a curved kidney-shaped outlet is disposed about an inlet of acorn shape so that the outlets have boundaries lying along the common circle which corresponds to the circular inlet of the broad-mouth die.

10 Claims, 3 Drawing Sheets









COEXTRUSION BLOCK, ESPECIALLY FOR THE COEXTRUSION OF GENERALLY FLAT PVC ARTICLES, SUCH AS SIDING

FIELD OF THE INVENTION

My present invention relates to a coextrusion block for the coextrusion of thermoplastic articles and, more particularly, the coextrusion of flat articles such as siding.

BACKGROUND OF THE INVENTION

Coextrusion of PVC (polyvinyl chloride) allows various types of PVC to be used in different zones of a workpiece. For example, coextrusion has been used to bond a capstock material in a relatively thin exposed superficial layer, to a substrate material which can be a PVC foam.

In the past, for the coextrusion of generally flat workpieces, such as siding, it has been the practice to feed the two streams of PVC to the outlet of a coextrusion block in a pattern in which, over the length of the passages for the materials in the coextrusion block, the flows were generally of rectangular cross section.

When the two flows emerged at the circular outlet, the capstock material occupied a segment separated from the body of substrate material by a chord of the circular outlet.

Coextrusion of PVC for the production of siding in this fashion has been found to involve problems with respect to burn up. Heretofore, because of the way in which the two flows were generated in the extrusion block and met at the outlet, flow angles were considerable and back pressure at high output rates generated high temperatures resulting in damage to the PVC materials and the need to carefully control the compositions of such materials and counteract the tendency to burn up by adjustment of the composition. The need to carefully control the composition to prevent burn up, of course, greatly reduced the versatility of the apparatus.

OBJECTS OF THE INVENTION

It is the principal object of the present invention to provide an improved coextrusion assembly which eliminates the drawbacks enumerated above.

Another object of the invention is to provide an improved coextrusion block in which the spreading of the material into rectangular patterns in the die, especially broad flat patterns, starting from a circular die inlet, can be improved.

SUMMARY OF THE INVENTION

I have discovered that the disadvantages outlined above can be reduced or eliminated by providing a coextrusion block, especially for PVC and flat workpieces to be made by coextrusion therewith, in which the capstock material is caused to flow in a manner which enables the capstock material to straddle the flow of substrate material so that the outlet of the flow passage for the capstock material has an arcuate kidney shape while the material flanked thereby has an acorn-shaped flow cross section and outer margins of the outlets for the two materials lie along a common circle upon which the inlet of the die is centered and with which the die inlet registers.

More particularly, the apparatus of the invention can comprise:

a first extruder for supplying a synthetic resin capstock material;

a second extruder for supplying a synthetic resin substrate material;

a coextrusion block formed at one side with spaced-apart first and second circular inlets connected respectively to the first and second extruders for receiving the capstock material and the substrate material, respectively, the block being formed at an opposite side with a first outlet for the capstock material and a second outlet for the substrate material, the first outlet having generally an elongated arcuate kidney shape extending arcuately around and straddling the second outlet, the second outlet having a generally acorn-shaped outline, the first and second outlets having diametrically opposite margins lying along a common circle, the coextrusion block being further formed with respective passages smoothly connecting the first inlet with the first outlet and the second inlet with the second outlet; and a die having a circular inlet coaxial with the common circle and registering with both the outlets, a wide mouth from which a flat workpiece consisting of the materials in respective layers emerges, and a passage flaring from the circular inlet of the die to the mouth.

The invention, of course, also comprises the coextrusion block used in this assembly. While preferably the ends of the first coextrusion block outlet, i.e. the outlet for the capstock material, lie substantially at a plane through the center of the common circle and perpendicular to the symmetry plane, it is possible to terminate these ends short of this transverse plane or to extend the ends through and beyond this transverse plane.

BRIEF DESCRIPTION OF THE DRAWING

The above and other objects, features and advantages of the present invention will become more readily apparent from the following description, reference being made to the accompanying drawing in which:

FIG. 1 is a side elevational view in highly diagrammatic form, illustrating the assembly of the present invention;

FIG. 2 is an elevational view of the assembly drawn to a larger scale;

FIG. 3 is a view taken along the line III—III of FIG. 1;

FIG. 4 is a view taken along the line IV—IV of FIG. 1; and

FIGS. 5 and 6 are fragmentary views showing the first and second outlets of the coextrusion block according to other embodiments of the invention.

SPECIFIC DESCRIPTION

The coextrusion assembly 10 shown in FIG. 1 comprises a coextrusion block 11 which is of rectangular parallelepipedal configuration with an inlet side 12 and an outlet side 13, parallel to one another. A first extruder delivering a capstock material is connected via its elbow 14 to a first inlet 15 for the capstock material as is best seen in FIGS. 1 and 3.

A second extruder delivering the substrate material, e.g. a foamable PVC, communicates with the circular second inlet 16 at the inlet side 12 of the coextrusion block.

At the outlet side of the coextrusion block, the capstock or first outlet 17 is formed with rounded ends 18 and has a curved kidney shape symmetrical about a symmetry plane P_1 .

The second outlet 19 is generally the outline shape of an acorn with a large arcuate sector 20 opposite a short sector 21. The sector 21 conforms generally to the inner curvature of the first outlet 17.

The outer margins 22 of the first outlet 17 and 20 of the second outlet 19 lie along a common circle of radius R having a center C_1 .

In the embodiment shown in FIG. 4, the rounded ends 18 terminate short of a transverse plane P_p through the center C_1 and perpendicular to the symmetry plane P_s . As can be seen from FIG. 4, moreover, the arcuate first outlet 17 in part straddles the flow through the outlet 19.

In the preferred embodiment illustrated in FIG. 5, the rounded ends 18 of the first outlet 17 for the capstock material lie substantially at the plane P_p . In the embodiment of FIG. 6, however, the rounded ends 18' project beyond the plane P_p .

I have found, quite surprisingly, that when the circular inlet of a siding die 25 is of radius R and registers with the two outlets 17 and 19, the two flows are so wrapped one around the other as to enable extrusion through a broad mouth 26 of the die in a two-layer extrusion 28 of siding without the drawbacks enumerated above.

Furthermore, the two layers are effectively bonded together and the capstock has been broken away at 29 from the substrate material at 30 in FIG. 2 only for purposes of illustration.

Burn up of PVC material is largely avoided even at high production rates.

In the drawing the passages 31 and 32, which connect the first inlet with the first outlet and the second inlet with the second outlet, have been illustrated only in dot-dash lines and can have any desired pattern, although generally they are developed with straight-line geometries.

I claim:

1. A coextrusion assembly for the extrusion of wide generally flat workpieces in the form of extruded siding, said assembly comprising:

a first extruder for supplying a synthetic resin capstock material;

a second extruder for supplying a synthetic resin substrate material;

a coextrusion block having an upstream side and a downstream side, said block being formed at said upstream side with spaced apart first and second circular inlets opening on a common face of said block and connected respectively to said first and second extruders for receiving said capstock material and said substrate material, respectively, said block being formed at said downstream side with a first outlet for said capstock material and a second outlet for said substrate material, said first outlet having generally an elongated arcuate kidney shape with terminal lobes connected by an arcuate region extending arcuately around and straddling said second outlet, said second outlet having a generally acorn-shaped outline with opposite rounded segments of different radii of curvature having S-shaped transitions between them, said first and second outlets having diametrically opposite margins lying along a common circle, said coextrusion block being further formed with respective passages smoothly connecting said first inlet with said first outlet and said second inlet with said second outlet whereby flow from said first outlet wraps around flow from said second outlet; and

7. The coextrusion block defined in claim 6 wherein said outlets are symmetrical with respect to a plane of symmetry including centers of said first and second inlets and said common circle.

8. The coextrusion block defined in claim 7 wherein said first outlet has rounded ends terminating substantially at a plane through said center of said common circle and perpendicular to said plane of symmetry.

9. The coextrusion block defined in claim 7 wherein said first outlet has rounded ends terminating short of a plane through said center of said common circle and perpendicular to said plane of symmetry.

10. The coextrusion block defined in claim 7 wherein said first outlet has rounded ends passing through and terminating beyond a plane through said center of said common circle and perpendicular to said plane of symmetry.

a die having a circular inlet coaxially with said common circle and registering with both sides outlets, a wide mouth from which a flat workpiece consisting of said materials in respective layers emerges, and a passage flaring from said circular inlet of the die to said mouth.

2. The coextrusion assembly defined in claim 1 wherein said outlets are symmetrical with respect to a plane of symmetry including centers of said first and second inlets and said common circle.

3. The coextrusion assembly defined in claim 2 wherein said first outlet has rounded ends terminating substantially at a plane through said center of said common circle and perpendicular to said plane of symmetry.

4. The coextrusion assembly defined in claim 2 wherein said first outlet has rounded ends terminating short of a plane through said center of said common circle and perpendicular to said plane of symmetry.

5. The coextrusion assembly defined in claim 2 wherein said first outlet has rounded ends passing through and terminating beyond a plane through said center of said common circle and perpendicular to said plane of symmetry.

6. A coextrusion block for use with two extruders and an extrusion die for producing generally flat workpieces in the form of extruded siding by the coextrusion of two polyvinylchloride materials, said coextrusion block comprising a body having an upstream side and a downstream side, said body being formed at said upstream side with spaced apart first and second circular inlets opening on a common face of said block and connected respectively to first and second ones of said extruders for receiving a capstock polyvinylchloride material and a substrate polyvinylchloride material, respectively, said block being formed at said downstream side with a first outlet for said capstock material and a second outlet for said substrate material, said first outlet having generally an elongated arcuate kidney shape with terminal lobes connected by an arcuate region extending arcuately around and straddling said second outlet, said second outlet having a generally acorn-shaped outline with opposite rounded segments of different radii of curvature having S-shaped transitions between them, said first and second outlets having diametrically opposite margins lying along a common circle so as to communicate with an inlet of said die registering with said common circle, said body being further formed with respective passages smoothly connecting said first inlet with said first outlet and smoothly connecting said second inlet with said second outlet whereby flow from said first outlet wraps around flow from said second outlet.

7. The coextrusion block defined in claim 6 wherein said outlets are symmetrical with respect to a plane of symmetry including centers of said first and second inlets and said common circle.

8. The coextrusion block defined in claim 7 wherein said first outlet has rounded ends terminating substantially at a plane through said center of said common circle and perpendicular to said plane of symmetry.

9. The coextrusion block defined in claim 7 wherein said first outlet has rounded ends terminating short of a plane through said center of said common circle and perpendicular to said plane of symmetry.

10. The coextrusion block defined in claim 7 wherein said first outlet has rounded ends passing through and terminating beyond a plane through said center of said common circle and perpendicular to said plane of symmetry.

EXHIBIT 10:
Declaration of Paul Vegliante submitted under 37 CFR
1.132, dated July 18, 2008 with exhibits A-F thereto.
(“Vegliante Decl.”)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	Customer No.
VEGLIANTE et al.	:	26817
Serial No. 09/741,521	:	
	:	Group Art Unit: 3724
Filed: December 20, 2000	:	Examiner: Sean M. Michalski
Title: FILM CUTTER ASSEMBLY	:	Confirmation No. 6443
	:	x

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF PAUL VEGLIANTE
SUBMITTED UNDER 37 CFR 1.132

Sir:

I, Paul Vegliante, Executive Vice President of Operations of AEP Industries, Inc. (hereinafter referred to as "AEP"), assignee of the above-referenced application, with offices located at 125 Phillips Avenue, South Hackensack, New Jersey 07606, and an inventor of the above-described patent application, hereby declares as follows:

1. Exhibits A-F attached herewith show that the market for AEP for a conventional slide cutter manufacture by Handy-Age Industrial Co., Ltd. ("Handy-Age") between 1992 and 1998 was 25,000 pieces per year. In 1998, the market was increased to 100,000 pieces. Reynolds, in spite of filing several patent applications, did not commercialize their own slide cutter. Instead, Reynolds needed to buy the slide cutter from Handy-Age. Accordingly, the sales of a conventional slide cutter between 1992 and 1998 were up to 100,000 pieces per year. As shown below, the sales of a slide cutter having the features of the present claims have increased remarkably to 30-50 million pieces.

2. Exhibit A shows in August of 1998 Michael Piccone of First American Trading

sent this exhibit indicating that the manufacturer of the "Plastic Wrap Cutter", Handy-Age, was showing signs of discontent with the volume that AEP was solely moving. Michael Piccone explained that since Borden had come into the market with exclusive license to sell the cutter, both Reynolds and Anchor had been aggressively pursuing him to open the market because both Reynolds and Anchor wanted to sell the blade as well, seeing that this was the only marketable cutter on the market. AEP was contracted to sell 25,000 cutters per year. AEP was given the exclusive is AEP could guarantee that amount in 1992.

3. Exhibit B is a copy of the original contract from 1992 between Borden/AEP and First American Trading reflecting an exclusive right to sell "Handy Wrap Cutters" if AEP could move 25,000 units per year.

4. Exhibit C is a copy of Michael Piccone's contract from January 1998 showing that he agreed to sell 100,000 units per year in the U.S. even though AEP had an exclusive contract with him for 25,000 units.

5. Exhibit D is a copy of a letter from Paul Vegliante of AEP from 1998 offering to release the terms of a 1992 agreement with First American Trading and purchase 100,000 cutters guaranteeing First American Trading meet its new requirements from Handy-Age in Taiwan.

6. Exhibit E is a copy of a letter from Paul Vegliante dated October 30, 1998 in which Paul Vegliante reaches out to one of the owners of Handy-Age explaining Michael Piccone's contractual obligations to AEP, AEP's willingness to increase sales to 100,000 units and the fact that if they continue with this action, AEP will no longer purchase these "Handy Wrap Cutters" in the future. Paul Vegliante went on to further state that if the product was offered to the open market that AEP would be forced to introduce a new competitive product that would compete with Handy-Age's product.

7. Exhibit F is a copy of a January 1, 1999 letter from Michael Piccone where Michael Piccone removed the exclusive right to sell in spite of AEP having met all the terms of the exclusive agreement.

8. In 2001 AEP commercially launched the first sales of their newly developed slide cutter product with A&P food stores. In bringing slide cutter product to market AEP spent zero dollars in the marketing of the slide cutter product. The slide cutter product is marketed under

the trademark SAFETY SLIDE CUTTER, registered in the United States. Although AEP was the leading manufacturer of PVC films in North America, the company had never before entered the consumer retail market. Based solely on the slide cutter product, A&P food stores picked up the slide cutter product and the slide cutter product was the first food film to be sold with a corresponding slide cutter in the market. The slide cutter product received mild success in A&P in spite of the fact that there were zero marketing dollars spent on a new film product and new cutting device which defies traditional consumer retail success.

9. The slide cutter product corresponds to the invention described and claimed in at least claim 1 of the present patent application.

10. The mere implementation of the slide cutter product on the shelves at A&P started a fire storm in the retail market amongst manufacturers of food films. Because the slide cutter product, as described in the claims of the present application, presents a very novel cling of plastic wrap to the film cutter to enable improved operation, competitors have started selling duplicate slide cutter products. Within one year of the introduction of the slide cutter product at A&P, Reynolds film introduced an exact duplicate of the slide cutter product into the market and incorporated the cutter in 100% of their retail food film product. Sales of the Reynolds film including a duplicate of the AEP slide cutter product represents sales of about 12 million boxes of film annually. At the same time, SC Johnson, the manufacturer of Saran Wrap, completed negotiation to purchase five million slide cutter products from AEP annually to include the slide cutter product in all Saran Wrap food film.

11. On the retail side of the business it is estimated that the AEP slide cutter and duplicates of the AEP slide cutter have penetrated as much as 25% of the retail sales with zero dollars spent in marketing. On the commercial side of the business AEP is one of five main players for manufacturing food film in North America. Those manufacturers are AEP, Reynolds, Anchor, Polyvinyl and Pliant. It is my best professional estimate that 95% or more of the North American market is controlled by these five manufacturers. Every one of these manufacturers, except Pliant, is using duplicates of the slide cutter product which is known to AEP as we compete with these suppliers every day. Pliant has elected to purchase the slide cutter product from AEP.

12. On the commercial side, the slide cutter product is in every major wholesaler and has also been brought into mass merchandisers such as Costco, Sam's Club and BJ's Wholesale Club.

13. As of today, the following is a list of countries that AEP is aware of that currently have sales of the AEP slide cutter product or duplicates of the slide cutter product. This list is limited by not knowing where numerous Chinese and Taiwanese copy cat slide cutter product are going and solely reflects AEP's penetration on a global level. The known countries are as follows:

USA	Canada	Spain	France	England
Ireland	Belgium	Germany	Czech Republic	Japan
China	Mexico	Belize	Australia	New Zealand
Italy	Bermuda	Africa	Costa Rica	Brazil
Netherlands	Austria			

These 22 countries only represent a portion of the penetration that the slide cutter product has had globally.

14. There are several additional manufacturers of duplicates of the AEP slide cutter product. Handy Age in Taiwan is manufacturing the slide cutter product and there are at least two additional manufacturers in China and at least one in Japan.

15. It is AEP's estimate that somewhere between 30-50 million of the slide cutter products are sold globally in both the retail and commercial environments. AEP moves approximately 3 million pieces per year and it is estimated that Reynolds moves about 15 million per year between retail and commercial. Anchor, Polyvinyl, Metal Edge in the USA and the Chinese, Japanese, Taiwanese and Czech Republic manufacturers abroad easily reach the numbers of the estimates for sales. The sales of the conventional slide cutter of 100,000 cutters per year have unexpectedly significantly increased to 30-50 million slide cutter products sold per year which sales are based on the features of the claimed design of the cling of plastic wrap to the cutter before during and cutting of the plastic wrap.

16. With regard to AEP's relationship to the market, AEP has been a market leader in the commercial arena for many years. However, the slide cutter product started in the retail market where AEP has no relationship and no history of sales. When AEP entered the retail market with a slide cutter product, Reynolds copied the slide cutter product and SC Johnson purchased the slide cutter product from AEP in fear of AEP becoming a retail threat. With regard to Europe, AEP had plants in Spain, Netherlands, Italy and Belgium when the slide cutter product was invented. AEP had no retail relationship in Europe. Yet, as noted above, the slide cutter product has flourished in Europe in spite of lack of marketing and the slide cutter product has moved to other global regions.

17. Considering the complete lack of marketing, the slide cutter product has achieved staggering global penetration.

18. The following is an incomplete but pertinent list of previous competitors patents applications for inventions directly related to cutting food film. Every major player mentioned above had tried to patent a new methodology of cutting food film. However, efforts of the major players mentioned above have failed and they continue to sell duplicates of the slide cutter product.

Patent No.	Title	Inventor	Assignee	Date
3,277,760	Apparatus For Severing A Web	Keene et al.	W.R. Grace & Co.	October 11, 1966
3,549,066	Dispensing Carton	Wankow	Union Carbide Corporation	December 22, 1970
3,821,915	Fiber Cutting Apparatus With Self-Contained Blade Sharpener	Larrable	Paper-Pak Products, Inc.	July 2, 1974
4,196,647	Carton For Dispensing And Cutting Sheet Material	Fish	Reynolds Metals Company	April 8, 1980
4,197,774	Traveling Cutter Assembly	Singh et al.	Scott Paper Company	April 15, 1980
4,210,043	Cutting Assembly	Urion et al.	Scott Paper Company	July 1, 1980
4,960,022	Plastic Film Cutter	Chuang		October 2, 1990

Patent No.	Title	Inventor	Assignee	Date
5,243,890	Cutter Assembly	Ober		September 14, 1993
5,292,046	Roll Film Dispenser	Kaiser et al.	Allen Reed Company, Incorporated	March 8, 1994
5,440,961	Film Cutting Apparatus And Method	Lucas, Jr. et al.	Reynolds Metals Company	August 15, 1995
5,524,515	Support Panel For A Rotary Paper Cutter	Boda	Fiskars Oy Ab	June 11, 1996
JP 58217576	Urethane-Base Self-Adhesive Composition	Ooyama et al.	Sekisui Chemical Co Ltd	December 17, 1983
		Masatoshi		
5,273,809	Multilayer Stretch Wrap Film Inherently Exhibiting A Significant Cling Property	Simmons	Mobil Oil Corporation	December 28, 1993

19. An important feature highly appreciated by the customers and users is the functioning of the slide cutter product based on the cling of the plastic wrap to the cutter to enable the plastic wrap to be held in place before, after and during cutting of the plastic wrap.

20. It is my opinion that the slide cutter product can be termed a commercial success, insofar as AEP is concerned and that this is solely and directly related to the claimed features of our device. There has also been a long felt need in the industry for an improved slide cutter which need is shown by competitors now selling duplicate slide cutter products with the features of the slide cutter product.

21. The commercial success of the slide cutter product of the present invention was not the result of heavy promotion or advertising, nor consumption by purchasers normally tied to Applicant's or other business events extraneous to the merits of the invention set forth in the claims. AEP has not actively marketed the SAFETY SLIDE CUTTER. The slide cutter product has been added to conventional plastic wrap and a conventional box and the commercial success

is not tied to the plastic wrap or box used to house the film cutter. There have been no "give aways" of the product defined by the claims, or any other inducements or concessions in selling the product defined by the claims. Instead, the commercial success was as a result of the advantageous physical and economic results attained by the subject matter set forth in the claims of the application, which I have read and understand.

22. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and, further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing therefrom.

By: 
PAUL VESLIANTE

Dated: July 18, 2008

Exhibit A
of Declaration of Vegliante

HANDY-AGE INDUSTRIAL CO., LTD.

FAX: 886-2-27012320

http://www.handyage.com.tw

TEL: 886-2-27552106

E-mail: handyage@ms8.hinet.net

TELEFAX

TOTAL PAGES:

TO : FIRST AMERICA TRADING CO.

ATTN : MR. MICHAEL L PICONE

DATE: AUG 14, 1998

SUBJECT: YOUR FAX OF AUG 12

DEAR MICHAEL:

GOOD MORNING !! THANKS FOR YOUR FAX OF AUG 12 TO KEEP US INFORMED OF YOUR MARKET STATUS.

AS OF NOW '98 THIRD QUARTER, THE PROSPECTION OF USA MARKET SEEMS NOT GOOD AS EXPECTED. FRANKLY SPEAKING, THERE SHOULD STILL HAVE A LOT OF MARGIN OF MARKET PLACE FOR US TO DEVELOP OTHER THAN AEP. AS THE STANDPOINT OF MANUFACTURER, WHO USUALLY REGULATE THE EXCLUSIVE AGENT TO HAVE SOME SUBSTANTIAL ORDER QUANTITY WITHIN A FEW PERIOD OF TIME, OR THEY WILL CONSIDER TO FIND THEIR WAY FOR SUSTENANCE. FOR 3 QUARTERS/YEARLY LESS THAN 50K PCS FROM U.S EXCLUSIVE, NONE CAN SUSTAIN, NONE LIKE "HANDY-AGE" DEVOTED TO THEIR WORDS.

UNDERSTAND YOUR MARKET "SLOW TIMES" MAY HAVE CONNECTION WITH ASIA FINANCIAL CIRSIS, DURING THIS DIFFICULT SITUATION, MANUFACTURER IS EVEN MUCH TOUGHER THAN EXCLUSIVE AGENT, WE CAN'T KEEP SEEING MARKET RECESSION, BOTH US MUST JOIN THE EFFORT TO DO SOMETHING ABOUT THIS AND TRY TO DEVELOP A NEW PHENOMENAL MARKET SHARE FOR '99 AND THE YEARS TO COME. WE HAVE TO WELL PROJECT OUR MARKET STRATEGY.

PLS CHECK IF THERE IS ANY MAGAZINE ISSUES CIRCULATING EFFICIENTLY IN YOUR MARKET, BOTH OF US MAY CONSIDER IT AND SEE IF IT CAN FUNCTION AS A GOOD PROMOTION MEDIUM. HOPE OUR PROJECTION CAN BE ACHIEVED, PLS KINDLY COMMENT. LOOKING FORWARD TO HEARING FROM YOU SOONEST. WITH BEST REGARDS


CHRISTINE

PAUL, THIS IS A NICE LETTER THAT IS TELLING ME I COULD BE TERMINATED, AND MORE SALES ARE A MUST!

PLEASE CALL ME WHEN TIME PERMITS.

THANKS, MICHAEL L PICONE

Exhibit B
of Declaration of Vegliante

THIS AGREEMENT, MADE IN DUPLICATE, BETWEEN FIRST AMERICAN TRADING CO., OF TARZANA, CALIFORNIA (HEREINAFTER CALLED "A") AND BORDEN PACKAGING AND INDUSTRIAL PRODUCTS, DIVISION OF BORDEN, INC., OF NORTH ANDOVER, MASSACHUSETTS (HEREINAFTER CALLED "B") CREATES EXCLUSIVE DISTRIBUTOR RIGHTS IN B UNDER THE TERMS AND CONDITIONS HEREINAFTER STATED.

WHEREAS, A HAS THE POWER AND AUTHORITY TO ENTER INTO THIS AGREEMENT, AND

WHEREAS, B IS WILLING TO UNDERTAKE THE PROMOTION AND THE SALE OF THE "PLASTIC WRAP CUTTER" ON AN EXCLUSIVE BASIS:

IT IS AGREED AS FOLLOWS:

- 1) TERRITORY. A HEREBY GRANTS B THE EXCLUSIVE RIGHT TO SELL THE "PLASTIC WRAP CUTTER" THROUGHOUT THE UNITED STATES, BUT ONLY TO THE CHANNEL OF TRADE CONSISTING OF THE INSTITUTIONAL FILM TRADE. See Appendix A.
- 2) TERM. B AGREES TO SELL A MINIMUM OF 25,000 UNITS THE FIRST YEAR. IN THE EVENT B DOES NOT SELL 25,000 UNITS THE FIRST YEAR, A, AS ITS EXCLUSIVE REMEDY, WILL HAVE THE OPTION TO CANCEL THIS AGREEMENT.
- 3) PRICE. (SEE ATTACHED WHOLESALE PRICE LIST.)
- 4) DELIVERY. ALL ORDERS WILL INCLUDE A "DELIVERED" PRICE TO BORDEN'S WAREHOUSE IN LA MIRADA, CALIFORNIA.
- 5) B SHALL HAVE THE RIGHT TO PRIVATE LABEL UNDER ITS OWN NAME AND DISTRIBUTE THROUGHOUT THE TERRITORY DESCRIBED ABOVE IN #1.
- 6) RENEWAL. PROVIDED B SELLS 25,000 UNITS OR MORE EACH YEARLY PERIOD (Sept. 1 - Aug. 31) THIS AGREEMENT SHALL REMAIN IN FORCE AND SHALL BE AUTOMATICALLY EXTENDED FOR SUBSEQUENT YEARLY PERIODS COMMENCING ON THE 1ST DAY OF ~~JUNE~~^{SEPTEMBER} SEPT.
- 7) A SHALL NOT SELL THE PLASTIC WRAP CUTTER IN THE U.S. TO OTHERS WITHIN THE INSTITUTIONAL FILM TRADE, BUT MAY SELL TO OTHERS OUTSIDE THIS CHANNEL OF TRADE.

BY

Michael L. Picone

MICHAEL L. PICONE
FIRST AMERICAN TRADING CO.

BY

James H. Borden

BORDEN PACKAGING AND
INDUSTRIAL PRODUCTS
DIVISION OF BORDEN, INC.

DATE

June 29, 1992

DATE

June 24, 1992

APPENDIX A

Borden's channel of trade is the Institutional business - customers who buy food service film in 12", 18" and 24" widths and 1000', 2000' and 3000' lengths.

PHH/mpmb
PHH-I:27

Exhibit C
of Declaration of Vegliante

AGENCY AGREEMENT

Ref:

Date:

This agreement is made on the 1st of January, 1998 by and between First American Trading Co., a company incorporated in the United States, with the principal office at Suite 317B, 18653 Ventura Blvd, Tarzana, California 91356 (hereinafter called "Agent") and Handy-Age Industrial Co., Ltd., a company incorporated in the Republic of China with the head office at 11F, No. 65, Section 2, An Ho Road, Taipei, Taiwan (hereinafter called "Supplier").

Whereas

- 1) The Supplier has developed the range of Handy Wrap Cutters with sizes of 12", 18" and 24" and has international distribution rights for these products; and
- 2) The Agent will market the range of Handy Wrap Cutters by advertising through the professional media, selected dealers or attending trade exhibitions.

NOW, THEREFORE, THE PARTIES DO HEREBY AGREE AS FOLLOWS:

1. Supply Area

The supplier grants the Agent the exclusive right to sell Handy Wrap Cutters throughout the United States to only the institutional film trade - (customers who buy food service film in 12", 18" and 24" widths and 1000', 2000' and 3000' lengths.)

Any sales to other area has to be agreed by the supplier.

2. Purchase Price

- 2.1 The Supplier has agreed to supply the Agent with products at the agreed price and foreign exchange rate.
- 2.2 The Supplier shall give at least 30 days notice of price increases and improvements, additions or refinements to the products, to enable the Agent to amend his advertising information. But, the difference of exchange rate is an exception.



P. O. BOX 96 602 TAIPEI TAIWAN, R.O.C.
TEL: (02) 7552406 (REP.) FAX: 886-2 7012320
TLX: 11876 HANDYAGE

3. Quantity

The Agent agrees to sell a minimum 100,000 pcs with assorted Sizes of 12", 18" and 24" Handy Wrap Cutters each year.

4. Payment

The Agent shall open 100% irrevocable L/C at sight in Supplier's favor or T.T. to the Supplier's account at the time of placing order.

5. Delivery

Shipment can be made within 60 days after receipt of the payment.

6. Quality

The Supplier warrants that all units supplied to the Agent shall be at least equal to the present "Handy Wrap Cutter" now being produced.

7. Patent

The Supplier represents that he owns all the rights to the design, construction and distribution of products by the Agent will not infringe upon patent or other rights of a third party.

8. Termination

Both parties have the right to terminate this Agreement in case any party fails to comply with terms and conditions of this Agreement.

9. Renewal

Provided all items are met and The Agent achieves contracted minimum quantity acknowledged and accepted by both parties each year, this agreement will renew for subsequent one year commencing January 1ST.



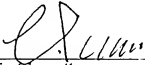
P. O. BOX 96-607 TAIPEI, TAIWAN, R.O.C.
TEL: (02) 7552406 (REP.) FAX: 886 2 7912320
TLX: 11876 HANDYAGE

Ref.:

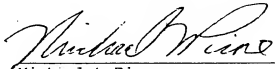
Date:

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed by their duly authorized representatives.

Supplier
HANDY-AGE INDUSTRIAL CO., LTD.


Christine Kuan

Agent
FIRST AMERICAN TRADING CO.


Michael L. Picone



P. O. BOX 96-602 TAIPEI, TAIWAN, R.O.C.
TEL: (02) 7552406 (REP.) FAX: 886-2 7012320
TLX: 11876 HANDYAGE

Exhibit D
of Declaration of Vegliante

AEP
INDUSTRIES INC.

November 5, 1998

First American Trading
18653 Ventura Blvd.
Suite 317B
Tarzana, California 91356

Attn: Michael Picone

Dear Michael,

I would like to confirm, in writing, AEP's offer to you regarding the purchase of slide cutters for 1999. AEP is willing to purchase one hundred thousand (100,000) slide cutters for the calendar year of 1999. AEP is also willing to forego its previous contractual obligation to purchase twenty-five thousand (25,000) units per year in order to keep its exclusive agreement.

We are willing to commit to one hundred thousand (100,000) pieces, delivered quarterly, in four twenty-five thousand piece increments based on AEP continuing with an exclusive agreement between itself and First American Trading. AEP strongly believes that with its new marketing plan we will be able to sell a significant amount more than that during 1999. Our contract would guarantee that you meet your minimum requirement with Handy Age now and in the future.

AEP is willing and committed to making every effort to fulfill your minimum and keep the exclusive agreement in tact as has been for the past six years. We at AEP look forward to hearing back from you at your earliest convenience. Thank you.

Sincerely,



Paul C. Vegliante
AEP Industries Inc.
Vice President of Operations

cc: Jean L'Allier
Rob Sasso

Corporate Headquarters
125 Phillips Avenue
South Hackensack, New Jersey 07606
(201) 641-6600 - (800) 999-AEPI (2374) - FAX (201) 807-2489
<http://www.aepind.com>

Exhibit E
of Declaration of Vegliante

October 30, 1998

Handy Age Industrial Co., LTD.
Attn.: Christine Kuan
PO Box 96-602 Taipei, Taiwan

Dear Ms. Kuan,

I am writing to you in hope of averting an action by First American Trading Corp. to remove AEP/Borden as an exclusive distributor of the Handy Age Slide Cutter product. As you are aware, AEP/Borden has been purchasing Slide Cutters from your company for approximately 6 years. During this time we have been very diligent in selling this item in the North American market. We have also defended and are currently defending against numerous law suits brought against our companies at AEP/Borden's expense. Before you allow Mr. Piccone to make such a decision I felt it pertinent to point out a few very important points.

AEP/Borden has an exclusive distributor agreement with First American Trading Corp. in North America (please see copy provided). Although Mr. Piccone believes it not to be valid, it is. The agreement calls for AEP/Borden to purchase a minimum of 25,000 Cutter Blades per year in order for that contract to automatically renew. To date we have purchased approximately 40,000 Cutter Blades. We have in no way breached our contract and are considering First American to be in breach of theirs.

Although I point out these details, I would like to resolve this situation in a much simpler manner. Mr. Piccone has made us aware that you are looking to increase sales of this product and we would like to do the same. During our acquisition of Borden the Slide Cutter ~~business suffered~~ but we are now in a position to aggressively market this item once again. Please understand that AEP/Borden is the largest producer of IPD films in North America. The other companies that Mr. Piccone is soliciting do not have the distribution network that AEP/Borden has nor have they the resources. If Handy Age elects to go through with the opening of the market there is no benefit for us to market the Slide Cutter any longer. It is not sensible to aggressively market something that everyone else has. This will obviously apply to the competition as well. We have verbally agreed to a guarantee of 100,000 Slide Cutters for 1999 with Mr. Piccone and we believe our new marketing effort will sell more. Unfortunately, Mr. Piccone insists on opening the market to the detriment of both Handy Age and AEP/Borden. We do not see the logic or benefit to Handy Age in this move.

Please be aware, AEP/Borden will cease and desist all purchasing of the Slide Cutter now and in the future if this action is taken. The other three companies will find it difficult to sell what we are willing to guarantee combined. ~~This will also open up all of the other companies to law suits. Are they willing to defend them as AEP/Borden has with no recourse to Handy Age? Furthermore, this action will force us to introduce a new product to compete directly with your Slide Cutter in the market. No one will win under these circumstances.~~ Please do not misconstrue the intent of this letter. It is merely to be sure you are aware of the ramifications that this action will have and how detrimental it will be to Handy Age as well as AEP/Borden. *(Send Mr. Picore)*

If possible, I would like to discuss the details of our offer with you. I understand that you will be traveling to the United States next week and am willing to fly out to Las Vegas if necessary to meet with you. Your prompt attention would be appreciated.

cc: Powers

Dillon

Faney

L'Allier

Exhibit F
of Declaration of Vegliante



Suite 317L 18653 Ventura Blvd. • Tarzana, California 91356 USA
Tel: 818-704-8999 • Fax: 818-594-0951

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

EFFECTIVE JANUARY 1, 1999

September 1, 1998

AEP Industries Inc.
125 Phillips Ave
Hackensack, NJ 07606

Attn: Paul Vegliante
Re: Exclusive Protection Of Institutional Market.

Dear Paul,

Regarding our conversations of the serious concerns of Handy-Age (i.e. Expiring Patents, and copycat cutters), along with the slow down in sales of sealwrap cutters, I will not be able to offer exclusive protection beginning in 1999.

Handy-Age is compelled to seek a larger U.S. market share other than AEP in the years to come. (see copy attached)

In addition, arrangements have been made for fixed 5,000 cs pricing for any future AEP orders.

Thank you for your understanding. Handy-Age and myself will always continue to make every effort for quality, and prompt service for the years ahead.

Sincerely,

Michael L Picone
First American Trading Co.

EXHIBIT 11:
Supplemental Declaration of Paul Vegliante Submitted
Under 37 CFR 1.132, dated December 9, 2009, with
exhibits G-N thereto. (“Supp. Vegliante Decl.”)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of VEGLIANTE et al.	: Customer No. : 26817 :
Serial No. 09/741,521	: : Group Art Unit: 3724 :
Filed: December 20, 2000	: : Examiner: Sean M. Michalski :
Title: FILM CUTTER ASSEMBLY	: Confirmation No. 6443 : x

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL DECLARATION
OF PAUL VEGLIANTE SUBMITTED UNDER 37 CFR 1.132

Sir:

I, Paul Vegliante, Executive Vice President of Operations of AEP Industries, Inc. (hereinafter referred to as "AEP"), assignee of the above-referenced application, with offices located at 125 Phillips Avenue, South Hackensack, New Jersey 07606, and an inventor of the above-described patent application, hereby declares as follows:

1. I am the same Paul Vegliante who submitted the previous Declaration Of Paul Vegliante under 37 CFR 1.132, in connection with the instant patent application. I submit this Supplemental Declaration in furtherance of my previous Declaration, the entirety of which I incorporate herein by reference, and to supply additional evidence concerning film cutter invention claimed in my patent application.

2. I have reviewed the prior art that has been cited during the prosecution of the instant application, and have found and believe that there is one very important distinction between the prior art and my claimed invention. An important matter, which is applicable to all of the rejections in the Action, including those based upon the combination of Lucas and

Wankow, and the Chuang reference and device, one must point to one very important distinction between the prior art and the claimed invention. None of the cited prior art references discloses a rail surface that provides cohesion between a rail surface and the film, as opposed to friction or adhesion, to enable the film to be cut by the cutter blade, both before during and after cutting. Cohesion, adhesion and friction are scientifically different instrumentalities. Cohesion or cohesive attraction is a property of substances, *caused by the intermolecular attraction between like-molecules* within the substances or materials that act to unite them. Adhesion is the tendency of certain *dissimilar molecules* to cling together due to attractive forces. Friction or dry friction uses a *static charge* to create an attraction between the surfaces of materials. The use of cohesion in the rail cutter of the instant invention, by *intermolecular attraction* of like molecules, is unique over the prior art in that it very firmly holds the film to be cut in place, before, during and after cutting, in a manner that is superior to the prior art devices that use friction, vinyl spots, rollers, hand pressure and similar means, as disclosed in the cited art.

3. Wankow, the only reference that arguably uses vinyl spots for some cohesion, teaches away from the present invention. Wankow's vinyl spots do have cohesion but are used to stop static cling from pulling the film back inside the box. The vinyl spots of Wankow teach away from the invention because they are positioned on the opposite side of the serrated cutting blade. The serrated cutting blade acts as a fulcrum where the opposite side of the vinyl spots needs to have hard, quick movement in order to serrate the film against the blade. The argument that Wankow's spots help in cutting goes against the laws of physics. On one side of the fulcrum Wankow uses three spots with very small cling properties to hold the film still (which is 1/10 the thickness and weight of paper). Very little cling is needed to avert the forces of static friction. On the opposite side, by way of common sense and physics, the cutting blade needs movement of the film and substantial downward pressure to cut the film on the static serrated blade. The claim that it aids in cutting is without merit. Because Wankow's spots have nothing to do with the cutting operation the claim that the combination of Lucas and Wankow renders that claims obviousness also holds no merit. The dots of Wankow are not used in the cutting mechanism at all; therefore a correlation between instant invention and the vinyl spots cannot be made.

Commercial Success Of The Invention

4. As I stated in my previous Declaration, the AEP slide cutter corresponds to claim 1 of the instant patent application. Further, it should be noted that the slide cutter as a whole is what is embraced by claim 1. That is, the AEP slide cutter is not a part or component of some other larger product.

5. Attached hereto as Exhibit G is graphic excerpt of an economic data summary from an independent Plastic Wrap Market Report ("PWMR"). The PWMR is issued annually and provides independent and reliable sales information and analyses concerning the Plastic Wrap Market, including such information and analyses for film cutters sold with plastic wrap. As shown on the lower right hand corner of Exhibit G, the PWMR is based on independent data from ACNielsen Scanned Data and Wal-Mart HomeScan Data.

6. The PWMR in Exhibit G is based on the ACNielsen and Wal-Mart data for the 52 week period ending January 29, 2005. Id., lower right hand corner.

7. As shown in the PWMR, approximately 89 million units of film cutters were sold during the relevant period. Also, as shown, Reynolds (16%) and Saran (8%) totaled approximately 25% of the market. During that period, Saran was an AEP customer, and, to the very best of my knowledge, sold the AEP film cutters which are the subject of the claims of the instant patent application, and Reynolds was infringing the instant patent application. Thus, according to the objective and independent data of ACNielsen and Wal-Mart, the assignee of the instant patent application penetrated, by 2005, at least 25% of the market for all film cutters. And, these figures exclude the 30 to 50 million film cutters made according to my invention in over 22 countries around the globe, as set forth in my previous Declaration.

8. Based on the data in the PWMR, the fact that (based on our company's marketing sales records) that 22 countries use our film cutter or copies thereof of my invention, and my best conservative estimates, I can safely and conservatively declare that 30-70 million of my cutters are sold around the globe.

9. Attached hereto as Exhibit H is documentation, including a spreadsheet provided by SC Johnson/Saran showing its estimate in early 2004 for the sale of 9.6 million pieces of the AEP slide cutter which is the subject of the instant application.

10. To supplement my previous Declaration, the commercial success of the AEP film

cutter, as described above and based on independent and reliable data, which is the subject of the instant patent application, penetrated as much as 25% of the retail sales market, *with zero dollars spent in marketing or advertising*. Thus, this commercial success was realized on the merits of the product alone.

11. Patents have been granted to AEP in Canada, Australia and New Zealand, the only foreign countries where applications were made that correspond to the instant application.

Copying Of The Invention

12. As I stated in my previous Declaration, there was and is wide spread copying of the invention covered by the instant application.

13. Attached hereto as Exhibit I are photographs of the Anchor Wrap Packaging product. As shown in the second page of this Exhibit is a photograph of a copy of the slide cutters of the instant invention that have been copied and sold by Anchor Wrap Packaging at least as early as 2004. We have investigated examined these slide cutters and have determined that they are copies of the slide cutters of the instant invention.

14. Attached hereto as Exhibit J is an excerpt from a Reynolds product locator web page, which shows Reynolds' sales of "EZ slide" with its plastic wrap. We have investigated examined the EZ slide cutters and have determined that they are copies of the slide cutters of the instant invention.

15. Attached hereto as Exhibit K are photographs of the Diamant Films Inc., of Canada, product. As shown in this Exhibit, the Diamant product is sold with a copy of the slide cutters of the instant invention that have been copied. The Diamant copy of our slide cutter has been sold up to this year. We have investigated examined these slide cutters and have determined that they are copies of the slide cutters of the instant invention.

16. Attached hereto as Exhibit L are documents pertaining to the copying of the slide cutter of the instant invention by Pliant Corporation, Polyvinyl Company and Metal Edge International, Inc. This information was supplied to us by our business partner Sonoco. As evidenced by this Exhibit, as of approximately, 2008, Pliant was selling copies of the slide cutter of the instant invention, copied and supplied by Polyvinyl, in what we believe to be significant amounts until they lost their account with Costco. However, after the loss of the Costco account,

Pliant continued to sell copies of the invention, but in lesser amounts. Also shown in Exhibit L, are photographs of Metal Edge's products, which are sold with slide cutters. We have investigated examined these slide cutters and have determined that they are copies of the slide cutters of the instant invention. We believe that Metal Edge has promised to stop copying our invention after receiving our objections to their conduct. All of these companies are active in both the United States and Canada.

17. Attached hereto as Exhibit M is a copy of a patent application filed by Alcoa, Inc. As shown in this document, the claims filed in the Alcoa application, clearly describe the slide cutter of the instant invention. Thus, Alcoa has sought to patent the slide cutter of the instant application.

18. Attached hereto as Exhibit N is an identification of at least some of the companies that have copied our slide cutter, including Durable Packaging International. Based on our investigation and evaluation, these companies have copied the slide cutter of the instant invention during one period of time or another, as set forth above and my previous Declaration, although some of them have ceased their copying.

19. Together with my previous Declaration, this Supplemental Declaration supplies the "hard" evidence of commercial success and wide spread copying of the slide cutter of the invention of the instant patent application, as was requested in the most recent Official Office Action.

20. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and, further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing therefrom.

Serial No: 09741.521

Doc No: 3112-31305

Date: December 9, 2009


Paul Verplanken

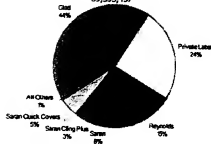
Exhibit G
of Supplemental Declaration of Vegliante



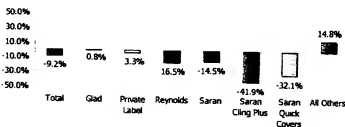
PLASTIC WRAP



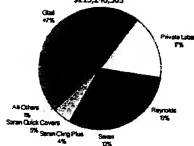
Sales Units
89,353,437



Unit % Chg vs YAGO



Sales Dollars
\$213,246,505



Dollar % Chg vs YAGO



Total US FDM Including Wal-Mart 52 Weeks Ending 1/29/05
AC Nielsen Scanned Data and Wal-Mart HomeScan Data

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

From: Sean Neiberger [mailto:sean@kaisermarketing.com]
Sent: Monday, May 17, 2004 3:45 PM
To: Vegliante, Paul
Subject: SC Johnson Box



Exhibit H
of Supplemental Declaration of Vegliante

-----Original Message-----

From: Filipowicz, Clint T. [mailto:CTFilipo@scj.com]
Sent: Wednesday, January 28, 2004 6:31 PM
To: Filipowicz, Clint T.; Vegliante, Paul; Gerulski, Kristopher W.; Oster, Paul H.; Sabol Jr, John S.; Morrissey, Thomas E.; Sasso, Robert; 'Mike.Tucker@sonoco.com'; 'Rudy.Pavlik@sonoco.com'; Yasatan, Mary Kay
Subject: RE: SCJ Volume Estimates

All,

I noticed a slight error in my spreadsheet. When I changed from a 6-month forecast to a 12-month forecast, I didn't add all of the columns correctly at the bottom. I have corrected that in the enclosed forecast.

Also, there is a large spike in July requirements to account for Holiday volume. Please take a look to ensure we have ramp-up capacity to meet the first three months of launch, as these are critical.

Thanks,

Clint

-----Original Message-----

From: Filipowicz, Clint T.
Sent: Wednesday, January 21, 2004 10:44 AM
To: 'Vegliante, Paul'; Filipowicz, Clint T.; Gerulski, Kristopher W.; Oster, Paul H.; Sabol Jr, John S.; Morrissey, Thomas E.; Sasso, Robert; Mike.Tucker@sonoco.com; Rudy.Pavlik@sonoco.com; Yasatan, Mary Kay
Subject: RE: SCJ Volume Estimates

Paul,

No problem with ordering full container quantities of cutters. Actually, during the first 3 months of launch, it looks like 800,000 actually works better with our projected demand than 500,000. This allows us to order 200,000 less cutters for the first month and 400,000 less over the first three months, which allows Sonoco more lead time for startup. After the first three months, it means we will have larger inventories and therefore it will affect our cash flow negatively.

Enclosed, I updated the volume estimate to reflect 800,000 container quantities. I would still like Rudy/Mike to review the dates and let us know when production must begin to meet our initial launch quantities. Note that I copied our planner on Saran, Mary Kay Yasatan, so that she can get involved in some of the lead time issues.

Thanks,

Clint

-----Original Message-----

From: Vegliante, Paul [mailto:VeglianP@aepinc.com]
Sent: Wednesday, January 21, 2004 9:17 AM
To: Filipowicz, Clint T.; Gerulski, Kristopher W.; Oster, Paul H.; Sabol Jr, John S.; Morrissey, Thomas E.; Sasso, Robert; Mike.Tucker@sonoco.com; Rudy.Pavlik@sonoco.com
Subject: RE: SCJ Volume Estimates

Thanks for the information Clint. Our containers hold approximately 550,000 -600,000 units when the slide cutters are in the bag. However, when the cutters are not in a bag the containers hold approximately 800,000 units. I will confirm that number for you by week's end. It is critical that we fully utilize the containers because the 33% increase per load was a major consideration in getting the prices down. Hopefully this works well for both of us as these containers will represent a 30 day supply based on projections. Thanks again.

Paul Vegliante

-----Original Message-----

From: Filipowicz, Clint T. [mailto:CTFilipo@scj.com]
Sent: Tuesday, January 20, 2004 6:08 PM
To: Gerulski, Kristopher W.; Filipowicz, Clint T.; Oster, Paul H.; Sabol Jr, John S.; Morrissey, Thomas E.; Vegliante, Paul; Sasso, Robert; Mike.Tucker@sonoco.com; 'Rudy.Pavlik@sonoco.com'
Subject: SCJ Volume Estimates

Gentlemen,

Thank you for participating in a valuable meeting today and for your support on this project. Again, we appreciate your cooperation.

Please find enclosed a preliminary volume estimate and desired delivery schedule for sliding cutters. This is our best current estimate and will not be binding, but will give an idea of the necessary ramp-up in automation to meet our launch timing and projected 1st year quantities. Note that firmer projections will be available around mid-May, after our final round of consumer testing. However, due to that late timing, the launch quantities for the first 2-3 months will likely remain as enclosed.

Also, I used Rudy's worst-case estimate of 6 weeks for shipping from Germany to Michigan. Do I need to add more time for freight from the Czech plant to Hamburg, or is that covered in the 6 weeks?

Finally, I used 500,000 as a full container quantity. If that number is actually higher, we will have to readjust the schedule, as it is based on ordering full containers.

Please let me know if this schedule is achievable. Also, please work backwards from our estimated first ship date and subsequent following ship dates to estimate the day that you first need to start production. I believe this corresponds to around February 15, but please verify on your end.

We are looking forward to working with you and meeting in Vienna next month. Thanks again.

Best Regards,

Clint Filipowicz
Custom Manufacturing
SC Johnson
(262) 260-5052
ctfilipo@scj.com

<<AEP Cutter Volume Estimate 12-22-03.xls>>

AEP Cutter Volume Estimate 1-26-04.xls

Sales Date (at RDC's)	Production Date (30 days prior)	Arrival Date (at Filcon)	Ship Date (8 wks prior)	Case Volume (12-count)	Desired Quantity (Cutters)	Actual Quantity (Sea Containers)	Actual Quantity (Cutters)	Carryover Inventory (Cutters)
07/01/2004	05/31/2004	05/17/2004	04/05/2004	83,400	778,016	1	800,000	23,984
08/01/2004	07/01/2004	06/17/2004	05/06/2004	127,225	1,557,234	2	1,800,000	66,750
09/01/2004	08/01/2004	07/18/2004	06/06/2004	65,065	796,386	1	800,000	70,354
10/02/2004	09/01/2004	08/18/2004	07/07/2004	70,000	868,800	1	800,000	13,554
11/02/2004	10/02/2004	09/18/2004	08/07/2004	68,000	807,840	1	800,000	5,714
12/03/2004	11/02/2004	10/18/2004	09/07/2004	55,200	676,548	1	800,000	130,066
01/03/2005	12/03/2004	11/18/2004	10/08/2004	68,700	840,888	1	800,000	89,178
02/03/2005	01/03/2005	12/20/2004	11/08/2004	43,300	529,592	1	800,000	369,188
03/06/2005	02/03/2005	01/20/2005	12/08/2004	48,000	598,780	1	800,000	599,426
04/08/2005	03/06/2005	02/20/2005	01/08/2005	44,800	548,352	0	800,000	11,074
05/07/2005	04/06/2005	03/23/2005	02/09/2005	36,000	440,640	0	800,000	370,434
06/07/2005	05/07/2005	04/23/2005	03/12/2005	40,000	489,600	1	800,000	880,834
TOTAL				728,890	8,919,166	12	9,600,000	2,380,558

Note: Holiday volume of 80,000 cases in July is included above in the case and cutter volumes.

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

From: Hughes, John
Sent: Tuesday, December 02, 2008 9:48 AM
To: Kuhne, Roger; Shahpazian, Robert
Cc: Sasso, Robert; Vegliante, Paul
Subject: RE: AEP Royalty from Sonoco - Nov 2008

Enclosed is the AEP Royalty from Sonoco for November 2008, which again lists 'No sales subject to royalty'.

Thanks,
John Hughes
AEP Industries Inc.
201-807-2313

12/02/2009

Slidecutter sales to Other Customers 2008

[illegible]

[REDACTED]

From: McGrath, Nathaniel
Sent: Wednesday, May 14, 2008 9:13 AM
To: Powers, John; Scoledes, Jim; Webb, Joe; Vegliante, Paul
Cc: Ariza, Patti
Subject: RE: Wal-Mart & Sams Club

John
Paul Warnica sent me a note with all the web site and I just added a few comments.
If you require any further information please let me know.
Nat

From: Warnica, Paul
Sent: Tuesday, May 13, 2008 6:07 PM
To: McGrath, Nathaniel
Subject: Competitive Slide Cutters

Nat,

I've redone me email to include a 6th company supplying slide cutters; Durable Packaging International.

1. Pliant

The Rollosheets link is no longer active so I went to Pliant's (U.S) page. Under the Wrap-It link they describe a "serrated blade and slide cutter mechanism" as being available. There are no pictures or further product descriptions provided. I have never seen a Wrap-It box with a slide cutter (other than ours).

www.pliantcorp.com

[McGrath, Nathaniel]

*Pliant uses the Zip safe blade to go to market with 2 items.
12"x3000" Kirkland Brand and 11x1000" Vita Wrap.*

2. Anchor

Their web page provides a product description, picture and code for their "Purity Wrap Safety Cutter". It comes in a 30 pack and is available in 12, 18 and 24" widths. From the photo it seems very similar to our slide cutter. I've never seen one in the field. I've left a message for Barry, though have not heard back.

[McGrath, Nathaniel]

A couple of the OPCO branches of Sysco buy Anchor Slide Cutter type blade.

www.anchorpackaging.com

3. Western Plastics

They have, what appear to be, our old yellow slide cutters listed on their web site. They offer 12 and 18" widths.

www.wplastics.com

[McGrath, Nathaniel]

12/02/2009

Western does make the blade available, all though I've never seen one in our market.

4. Reynolds

There are no cutter options offered on their Canadian site other than the "Grit Edge". I know they approached Sysco Peterborough several years ago with a version of our slide cutter, though apparently it didn't work very well, and in fact they refused to leave them a sample. Other than the one I saw in our office, I have never seen their slide cutter in the field.
www.reynoldsfoodpackaging.ca

[McGrath, Nathaniel]

Reynolds doesn't go to market here in Canada with a Slide Cutter type blade.

5. Ralston

Their PE cutter box is still listed on their web site. It comes with a "safety slider cutter blade". A former Ralston rep told me that they are no longer pushing this product.
www.ctigroup.com/ralston/english

[McGrath, Nathaniel]

3 years ago Ralston came to market with a polyethylene based film in 11" and 17"x2500" dispenser/ Slide Cutter type blade.

They never got a 2nd order and we have seen or heard of them in 2 years.
We sold Ralston 650,000 lbs of PVC last year through Trinity plastic.

6. Durable packaging Int'l

Although their web site doesn't mention them, their price list clearly lists a "safety slide cutter disp box". Available in 12, 18 and 24" widths. There are no pictures on their brochure so I can't tell if they are adhesive blades, though if they ship with each box they most likely are.

www.durablepackaging.com

[McGrath, Nathaniel]

We haven't seen a box in our market yet.

Paul

From: Powers, John
Sent: Saturday, May 10, 2008 4:38 PM
To: Scoledes, Jim; McGrath, Nathaniel; Webb, Joe; Vegliante, Paul
Cc: Ariza, Patti
Subject: RE: Wal-Mart & Sams Club

Lets discuss our Canada patent approval

1. cease & desist
2. royalties

Paul v have u gotten direction from our lawyers?

From: Scoledes, Jim
Sent: Thursday, May 08, 2008 3:44 PM
To: McGrath, Nathaniel
Cc: Powers, John; Scoledes, Jim
Subject: Wal-Mart & Sams Club

Hello Nat,

12/02/2009

Can you advise me as to who the current vendors are to Wal-Mart and Sam's Club in Canada?

A sample of each would be appreciated.

Thanks,
Jim Scoledes
124 San Remo Drive
Islamorada, Fl. 33036

305-607-4136

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

From: Mike.Tucker@sonoco.com [mailto:Mike.Tucker@sonoco.com]
Sent: Friday, January 11, 2008 3:18 PM
To: Vegliante, Paul; Paul" <VeglianP@aepinc.com,@sonoco.com
Cc: Sasso, Robert
Subject: Confirming European

Paul,

This email is to confirm the verbal agreement today between myself and Paul Vegliante that Sonoco and AEP will split royalties with Global (France) and Sonoco's agent in Israel. Sonoco will make every effort to get a royalty of \$.08 with Global and \$.10 in Israel. Sonoco will not go below a minimum of \$.07 per cutter with Global and \$.08 cents in Israel. These royalties will be split 50/50, paid and reported in the normal monthly process currently in place.

Please reply back to me that the statement above is correct.

Thanks,

Mike Tucker

Sonoco Molded Plastics
Phone: 518-392-1760
Fax: 518-392-2022
Cell: 518-369-9307

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12/02/2009

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

From: Hughes, John
Sent: Monday, November 02, 2009 4:36 PM
To: Kuhne, Roger; Shahpazian, Robert
Cc: Vegliante, Paul; Sasso, Robert; Frankovits, Martina
Subject: AEP Royalty from Sonoco - Oct 09

Enclosed is the AEP Royalty from Sonoco for October 2009.

Thanks,
John Hughes
AEP Industries Inc.
201-807-2313

12/02/2009

Slidecutter sales to Other Customers 2009

Period	Ship		Item #	Size	QUANTITY	AEP		Total per month
	DATE	CUSTOMER			SHIPPED	Rate	Commission	
1	01/16/2009	MODLING SAS	R-R04-9018-00-00	18.12 EUROPE SLIDECUT	100,500	0.062	\$	6,231.00
2	02/16/2009	APERIO GROUP (AUST.) PTY LTD, RAFFAST	R-R04-8022-00-00	484MM ZIPSAFE EUROPE	163,000	0.060000	\$	9,720.00
	02/16/2009	APERIO GROUP (AUST.) PTY LTD, RAFFAST	R-R04-8023-00-00	364MM ZIPSAFE EUROPE	151,200	0.050000	\$	7,560.00
3	03/04/2009	PLIANT CORP. - 131 TORONTO	R-R04-8014-00-00	PLIANT 13.12" SLIDERBAR	35,000	0.037000	\$	1,295.00
	03/29/2009	MODLING SAS	R-R04-9016-00-00	18.12 EUROPE SLIDECUT	30,000	0.062000	\$	1,860.00
	03/04/2009	PLIANT CORP. - 131 TORONTO	R-R04-8016-00-00	ZIPSAFE EUROPE 12.25	7,700	0.037000	\$	284.80
	03/16/2009	PLIANT CORPORATION PTY LTD	R-R04-8023-00-00	484MM ZIPSAFE EUROPE	162,000	0.065000	\$	10,530.00
4	04/17/2009	PLIANT FILM PRODUCTS GMBH	R-R04-8018-00-00	ZIPSAFE EUROPE 12.25	2,100	0.081000	\$	170.10
	04/17/2009	PLIANT FILM PRODUCTS GMBH	R-R04-8019-00-00	ZIPSAFE EUROPE 18.25 - 8027	1,500	0.091000	\$	136.50
5	05/08/2009	PLIANT CORP. - 131 TORONTO	R-R03-8031-00-00	SEALWRAP CUTTER 13.12	700	0.080000	\$	56.00
	05/08/2009	PLIANT CORP. - 131 TORONTO	R-R04-8014-00-00	PLIANT 13.12" SLIDERBAR	42,000	0.037000	\$	1,554.00
6	06/02/2009	PLIANT CORP. - 131 TORONTO	R-R04-9017-00-00	AEP 25.12 EUROPE SLIDECUT	750	0.080000	\$	67.50
	06/02/2009	PLIANT CORP. - 131 TORONTO	R-R04-9018-00-00	ZIPSAFE EUROPE 12.25	7,000	0.037000	\$	259.00
7	07/17/2009	PLIANT CORP. - 131 TORONTO	R-R03-8033-00-00	SEALWRAP CUTTER 18.12	700	0.100000	\$	70.00
	07/28/2009	PLIANT CORPORATION PTY LTD	R-R04-8020-00-00	PLIANT 14.5in (370MM)	151,200	0.060000	\$	9,072.00
	07/28/2009	PLIANT CORPORATION PTY LTD	R-R04-8022-00-00	484MM ZIPSAFE EUROPE	162,000	0.060000	\$	9,720.00
8	08/21/2009	HANDA CORPORATION	R-R03-8031-00-00	SEALWRAP CUTTER 13.12	10	0.050	\$	0.50
	08/21/2009	HANDA CORPORATION	R-R04-9014-00-00	PLIANT 13.12" SLIDERBAR	700	0.050	\$	35.00
	08/21/2009	PLIANT CORP. - 131 TORONTO	R-R04-8014-00-00	PLIANT 13.12" SLIDERBAR	42,000	0.037	\$	1,554.00
	08/27/2009	APERIO GROUP (AUST.) PTY LTD, RAFFAST	R-R04-8022-00-00	484MM ZIPSAFE EUROPE	162,000	0.06	\$	9,720.00
	08/27/2009	APERIO GROUP (AUST.) PTY LTD, RAFFAST	R-R04-8023-00-00	364MM ZIPSAFE EUROPE	151,200	0.0525	\$	7,938.00
9	NO SALES SUBJECT					0.000000		
10	10/03/2008	PLIANT CORP. - 131 TORONTO	R-R04-8014-00-00	PLIANT 13.12" SLIDERBAR	42,000	0.037	\$	1,554.00
11								
12								
YTD Total 2009								\$79,387.50

Exhibit I
of Supplemental Declaration of Vegliante

-----Original Message-----

From: Vegliante, Paul [mailto:VeglianP@aepinc.com]
Sent: Friday, February 06, 2004 11:44 AM
To: ddunmckay@mathewslaw.com
Subject: FW: metal edge copy on inside new anchor box

Diane,

We need to get that "Methodology Patent" ASAP, this is becoming a huge problem for us. Have the revised claims been sent in with the definition of cling?

Paul Vegliante

-----Original Message-----

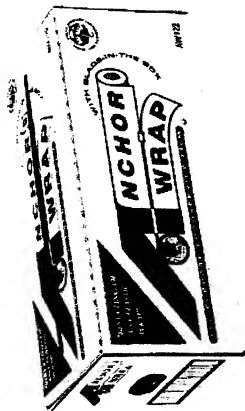
From: ian [mailto:ianlili@charter.net]
Sent: Saturday, January 31, 2004 2:38 PM
To: Sean Neiberger Work
Cc: Vegliante, Paul; Sasso, Robert
Subject: metal edge copy on inside new anchor box

<http://www.anchorpackaging.com/isapi/isapi.dll>

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Any views expressed in this message are those of the individual sender, except where the sender specifies and with authority, states them to be the views of AEP Industries Inc.



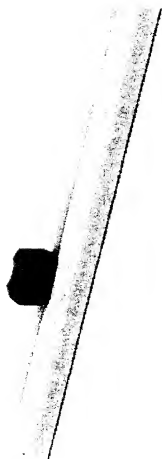


Exhibit J
of Supplemental Declaration of Vegliante

[REDACTED]

[REDACTED] [REDACTED]
[REDACTED] [REDACTED]
[REDACTED] [REDACTED]
[REDACTED] [REDACTED]
[REDACTED] [REDACTED]

[REDACTED]

From: sean neiberger [mailto:sean@allenreed.com]
Sent: Monday, April 21, 2008 1:20 PM
To: Vegliante, Paul
Cc: Mike Tucker
Subject: Reynolds EZ Slide Discontinued

On:

Advanced Recipe Search

On:



My Brands Inc.
395 Summit Point Dr., Ste. 1
Henrietta, NY 14457
Toll-free: 1-888-281-6400
E-mail: customerservice@mybrandsinc.com

Product Locator

Where to Buy New Reynolds® Handi-Vac™ Vacuum Sealing System?

The product is available at major grocery and mass retailers such as Wal-Mart and Target stores in the wraps and bags aisle.



Discontinued Products

- Reynolds® Hot Bags
- Reynolds® Plastic Wrap with EZ Slide
- Reynolds Wrap® Release® Grill Foil
- Reynolds® Pot Lux™ Disposable Cookware
- Reynolds® FunShapes™ Baking Cups and Cake Pans

Unfortunately due to low consumer demand, we have decided to discontinue these products and all inventory has been depleted. We regret that we cannot make this product available to you and apologize for any inconvenience this has caused.

Can I Buy Direct?

Reynolds, like many manufacturers, has established a policy of selling our products to wholesalers who, in turn, distribute them to retail establishments. Because of our contractual agreements with wholesalers, we cannot sell our products directly to consumers.

If your local store does not stock a favorite Reynolds product, you may be able to order it direct from My Brands Inc. and have it shipped to your door.

Their contact information is:

My Brands Inc.
395 Summit Point Dr., Ste. 1
Henrietta, NY 14457
Toll-free: 1-888-281-6400
E-mail: customerservice@mybrandsinc.com



Exhibit K
of Supplemental Declaration of Vegliante

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

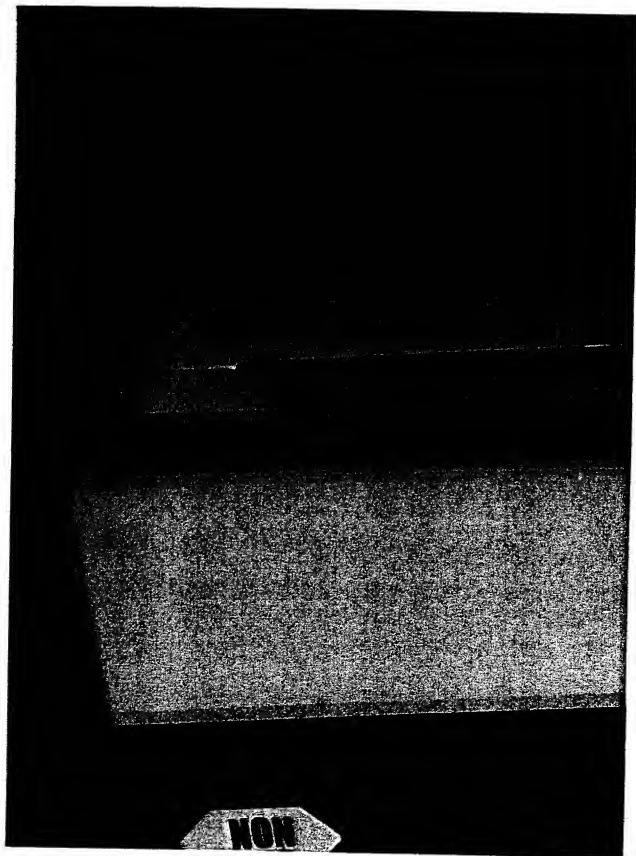
[REDACTED]

[REDACTED]

[REDACTED]

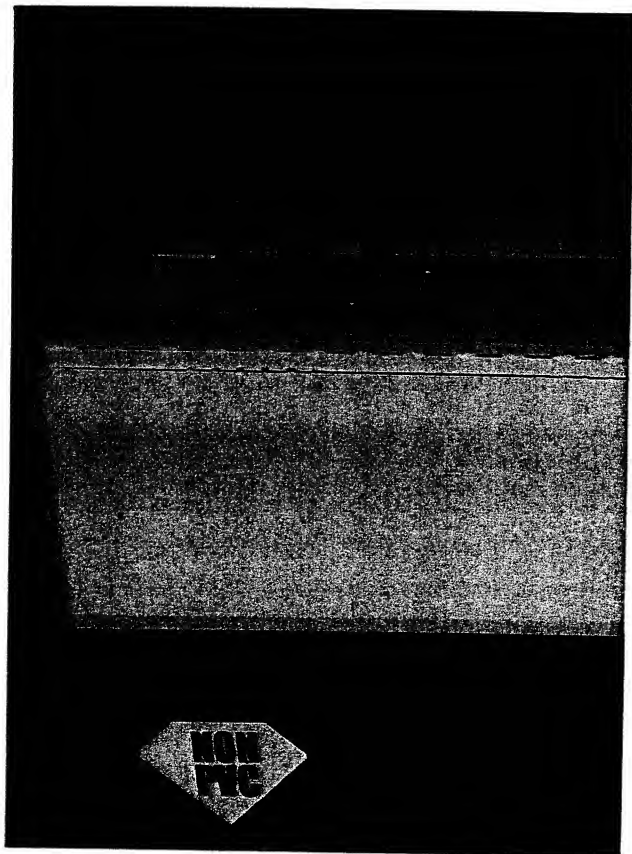
From: McGrath, Nathaniel
Sent: Tuesday, April 21, 2009 9:52 AM
To: Webb, Joe; Doshi, Anil; Vegliante, Paul
Cc: Powers, John
Subject: Diamant Films Inc.

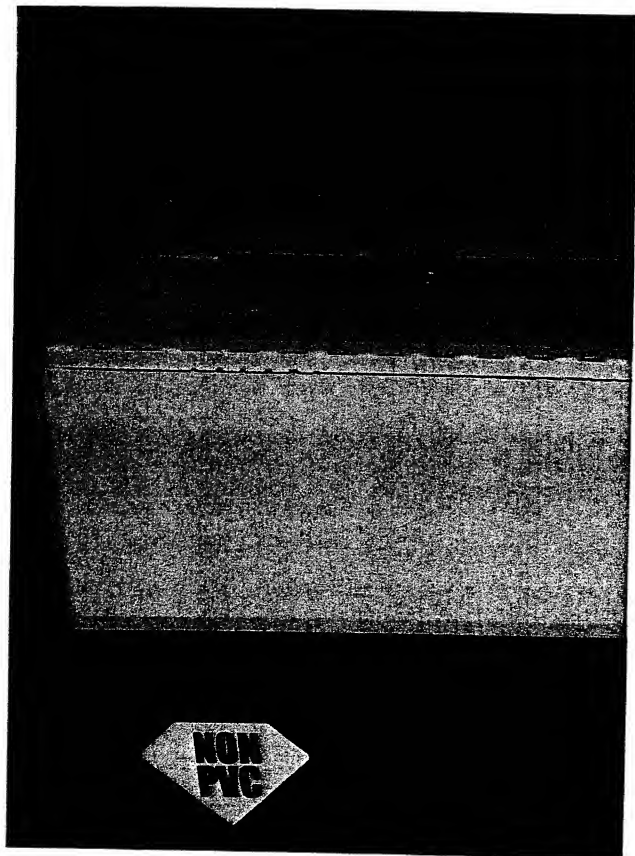
12/02/2009

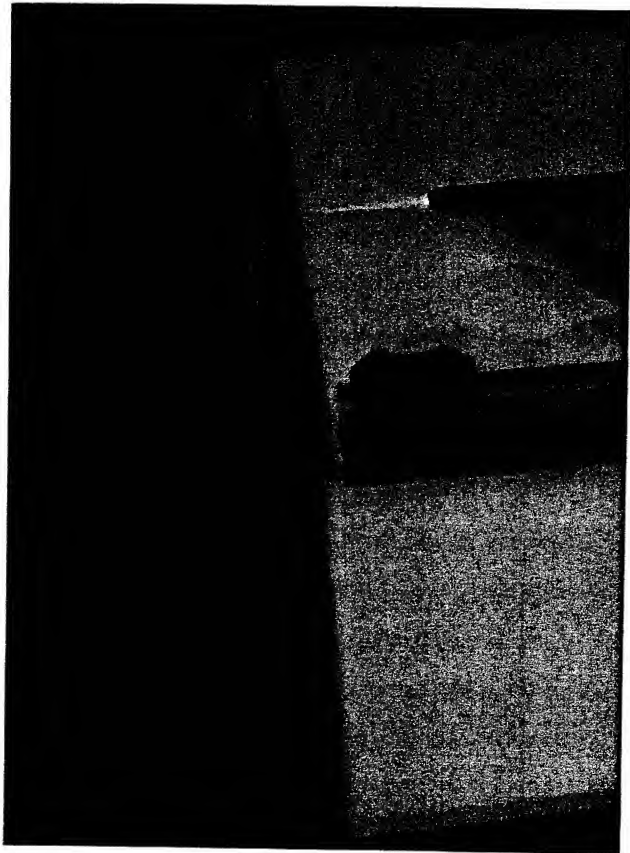


FOR MORE DETAILS ABOUT
OUR WEBSITE AT / POUR
PROPOS DE NOTRE PROJET
www.diamantfilm.com

Diamant Film Inc.
is a Division of / est une division de
Diamant Art Corporation
7100 Warden Avenue, Unit 10
Markham, Ontario
Canada L3R 8B5







Attached are 6 files on Diamant Films Inc.

- Pictures of the boxes, Zip Safe type blade, and their address in Canada.
- 2 page brochures printed 4/17/2009.

The only private brands dispensers we make in Canada is for Colabor in Quebec. One of their members bought a truckload of the above for.

The 12x2000' for \$9.00/roll and \$11.00 for the 18x2000'.

Nat.

12/02/2009



DIAMANT FILM INC.

The PVC-Free Food Wrap Alternative

[Home](#) [Web Sales](#) [News Releases](#) [Links](#) [Contact Us](#)

BioSmartProducts

November 28th, 2008 | posted by Diamant Film Inc. in [Announcements](#)

Please check back soon for developments in the BioSmartProducts line.

Nor-X Technology

October 24th, 2007 | posted by Diamant Film Inc. in [Announcements](#)

Here are 18 major differences we used to differentiate between the two types of technologies, Nor-X advanced additives vs the rest!

[Read more](#)

Powerpoint Presentation

This article presents a slide show made from a Powerpoint presentation about the Diamant film product.

[Read more](#)

Diamant Food Wrap

in [Content](#)



One of the world's first NON-PVC polystyrene-based stretch films, Diamant Food Wrap is a revolutionary health oriented product that is both recyclable and ecologically friendly.

For consumers who want an alternative to PVC-based stretch film, Diamant Food Wrap is the natural choice.

Properties

- Contains no plasticizer or chlorine and is NON-carcinogenic
- Completely recyclable
- Reduces Water vapor permeability
- Requires 25% less material

Web Sales

[Click here to buy Diamant on-line.](#)

Never store your food in contact with PVC food wrap again.

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Diamant™ Film Inc., a wholly owned subsidiary of Diamant Art Corp., (a publicly traded company on the US OTCBB under the symbol DIAAF) is the exclusive distributor of Diamant™ Food Wrap.

Diamant™ Film Inc. is dedicated to producing environmentally friendly products aimed at minimizing pollution, maximizing the quality of life and preserving the environment.

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Exhibit L
of Supplemental Declaration of Vegliante

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
R [REDACTED]

From: Robert Shepherd [mailto:shep@mathewslaw.com]
Sent: Tuesday, January 20, 2009 3:05 PM
To: Vegliante, Paul
Subject: metal edge

Hi Paul,

I just heard from the attorney representing Metal Edge. They are going to cease selling the slide cutter in Canada. I think they were stalling in their response to get some last sales out.

[REDACTED]

Bob

12/02/2009

[REDACTED]

From: Mike.Tucker@sonoco.com [mailto:Mike.Tucker@sonoco.com]
Sent: Friday, February 29, 2008 2:23 PM
To: sean neiberger
Cc: Vegliante, Paul
Subject: Re: MetalEdge International -

Sean & Paul,

Pliant lost the Costco USA business last year. The samples I brought in to AEP offices in NJ where supplied by Polyvinyl and the Chinese slip on cutter.

We have worked with P&G / Glad and they are not using a cutter bar at this time. They are discussing a new package with a cutter, but they are moving slowly.

Pliant has consignment inventory of our cutter bars which is moving slowly. They have introduced the cutter to some new customers and said they are introducing a new consumer package. Their volume is extremely slow compared to when they had Costco.

Other news is: We received a large order in Europe, second customer in France and a second in Australia late last year. I am quoting another extruder to see if I can offset the impact of the Euro. This week the Euro hit a record against the dollar. (\$1.51 USD for 1 Euro)

Paul, I would like to get together soon. (week after next)

Thanks,

Mike Tucker

Sonoco Molded Plastics
Phone: 518-392-1760
Fax: 518-392-2022
Cell: 518-369-9307

sean neiberger <sean@alienreed.com>

02/28/2008 01:38 PM

To: Paul Vegliante <VeglianP@aspinc.com>
cc: Mike Tucker <mike.tucker@sonoco.com>
Subject: MetalEdge International -

12/02/2009

Paul:

I was looking at the competition's website and noticed a few things that were most concerning. Look at the Glad product... Could he be working with them on adding his slide cutter to the boxes??? Also, it looks like he has used the Costco "Pliant" box in his website. I'm assuming were still the sole supplier to Pliant?

Sean

www.metaledge.com

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12/02/2009



**METAL EDGE
INTERNATIONAL INC.**



MARKETS / APPLICATION >

Consumer / Food Service / Catering

The food service / catering, and retail / consumer - film, foil and parchment paper markets have long been served with Metal Edge Products. Starting with our four (4) Profile cutting edge blades and expanding to our range of safety blades, Metal Edge offers solutions for all foil, film and paper applications.



Consumer

- 100 Meter - Film Cutter Box

Metal Edge Product:

- 12" (30 cm) **Clip-On Design Slide Cutter**
- Clip - sized for e-flute or similar gauge material

[Click To View Larger Image](#)



Institutional / Catering - Foil Market:

- 18" (450 cm) Foil Cutter Box

Metal Edge Product:

- **Metal Edge #61 Profile Cutting Edge**
- Applied by BME - Blade Application System

[Click To View Larger Image](#)



Hiler - dispensing Blade

Metal Edge Product

- **Slip-On (SCP - Center Punch) Blade**
- Supplied in 12" - 18" & 24" lengths
- To Fit - 9-flute or similar gauge material



Institutional / Catering - Film Market

Metal Edge Product

- **Clip-On Slide Cutter - Custom Length**
- To fit - 4 flute corrugated

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CUTTING EDGE PACKAGING GROUP >



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Stick-On

Stick-On (adhesive back) Slide Cutters attach to any flat carton panel (corrugated or paperboard) or surface that allows the film to be placed over the track. Stick-On Slide Cutters are ideal for package or dispenser designs where track placement is critical.

Benefits:

- Attaches to most any carton panel or dispenser surface
- Smaller footprint than "Clip-On" design
- Safe to use

[Link to Specifications \(PDF\) >](#)



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Clip-On

Metal Edge Int'l's unique "Clip-On" Slide Cutter design attaches easily and firmly to most cling film / food wrap cutter boxes. Designed to fit over the front leading edge of any cutter box (or similar gauge material), Clip-On Slide Cutters are an effective way to dispense cling film.

Benefits:

- Clips to the front panel of each cutter box or similar gauge material
- Used in many re-usable dispenser applications
- Easily separated and will not become part of the waste stream
- Re-usable - reduces packaging & packaging costs
- Safe to use

[Link to Specifications \(PDF\) >](#)

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[REDACTED]

From: Scoledes, Jim
Sent: Saturday, November 24, 2007 2:44 PM
To: Vegliante, Paul; Sasso, Robert
Cc: Powers, John; Barba, Brendan; Scoledes, Jim
Subject: PolyVinyl 12x3000 at Costco

Poly Vinyl has their new 12x3000ft in Costco at a retail price of \$9.99 far below the market.

They have taken away this size from PLIANT at Costco???

Their product offers the user a slide cutter or greater edge in the same box. This is a very good concept, since it over comes some of the objections that commercial users have to the slide cutter – and those are the folks who buy the 3,000ft roll.

The slide cutter has a channel which fits on top of the cardboard support – no sticky tape. Also, their slide cutter rail has the 2 stops on each end of the rail.

I would seriously consider doing cloning their product in our commercial sizes.

Rob,
I would appreciate it if someone could show this Costco product to John.

Thanks,
Jim

12/10/2009

Exhibit M
of Supplemental Declaration of Vegliante

[REDACTED]

From: Sean Neiberger [mailto:sean@kaisermarketing.com]
Sent: Monday, August 16, 2004 1:40 PM
To: Vegliante, Paul
Cc: Michael Kaiser; Sasso, Robert; GarryPearson@ColorGraphics.com; Ian Kaiser
Subject: ALCOA PATENT APPLICATION - March 4, 2004

Gentlemen:

Please read below the patent application filed by Alcoa, Inc. Please note the language used in claims clearly describe our product, however, claim 16 goes further to describe a co-extruded rail and its function.

Sean Neiberger

ALLEN REED COMPANY, INC.

310-575-8704 x 151

United States Patent Application

20040040429

Kind Code**A1****Nichols, Monica Stautner ; et al.****March 4, 2004**

Roll supporting *slide cutter* assembly incorporating a traversable cutter tab and in particular capable of being supported within a carton enclosure associated with a wrap material roll

Abstract

A *slide cutter* assembly for use in sectioning lengths of a packaging material drawn from a roll. The device includes an elongated and shaped body. A first roll supporting portion is located at a first end of said body and a second roll supporting portion is likewise located at a second end of the body. A cutter assembly extends from a selected lengthwise extending edge of the body and upon which an unwound length of the packaging material comes into contact. The cutter assembly incorporates a traversable blade for sectioning from the roll the length of packaging material. The roll of packaging typically comes in a generally elongated and three-dimensional shaped packaging, the cutter device being constructed so that it may be supported within an interior defined by the packaging and upon first mounting the roll between the first and second roll supporting portions.

Inventors:

Nichols, Monica Stautner; *(Richmond, VA)* ; **Grassel, William H.;** *(Delmont, PA)* ; **Powell, G. Douglas;** *(Richmond, VA)* ; **Rider, Richard W.;** *(Midlothian, VA)* ; **Shoup, Jeffrey M.;** *(Delmont, PA)* ; **Skiles, Jean Ann;** *(Gibsonia, PA)* ; **Speer, Robert J.;** *(Upper Burrell, PA)* ; **Micle, Frank R.;** *(Irwin, PA)* ; **Plank, David;** *(Export, PA)*

Correspondence Name and Address:

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ALCOA TECHNICAL CENTER

100 TECHNICAL DRIVE

ALCOA CENTER

PA

15069-0001

US

Serial No.:

460953

Series Code:

10

Filed:

12/04/2009

June 12, 2003

U.S. Current Class:

83/455; 83/614

U.S. Class at Publication:

083/455; 083/614

Intern'l Class:

B26D 001/04; B26D 005/10

Claims

1. A ***slide cutter*** assembly for use in sectioning lengths of a flexible material drawn from a roll, the roll including a core having oppositely open ends, said assembly comprising: an elongated body; a first roll supporting portion located at a first end of said body and a second roll supporting portion located at a second end, the oppositely open ends of the film roll core seating within said first and second roll supporting portions and in order to rotatably secure the packaging roll to the elongated body; and a cutter assembly located along a lengthwise extending surface associated with said elongated body, said cutter assembly incorporating a traversable blade for sectioning from the roll an unwound length of the material.

2. The ***slide cutter*** assembly as described in claim 1, said blade of said cutter assembly further comprising a first gripping portion and a

second track seating portion transversably supported within a rail associated with said elongated body.

3. The *slide cutter* assembly as described in claim 2, said track seating portion further comprising first and second offset portions for facilitating traversing of said blade a selected distance beyond an end of said rail.

4. The *slide cutter* assembly as described in claim 2, said rail further comprising an elongated and extruded plastic exhibiting an interior channel for receiving said track seating portion of said blade in traversable fashion.

5. The *slide cutter* assembly as described in claim 4, said rail further comprising first and second downwardly extending and elongated gripping portions, said elongated body further comprising at least one projecting snap portion over which said gripping portions are biasingly engaged.

6. The *slide cutter* assembly as described in claim 1, said elongated body further comprising a planar shaped and elongated support ledge upon which is supported an unwound portion of the flexible material.

7. The *slide cutter* assembly as described in claim 6, said support ledge further comprising a contoured extending edge.

8. The *slide cutter* assembly as described in claim 6, the flexible material further including a plastic film wrap, said support ledge

further exhibiting properties for preventing the film wrap from adhering to the surface of the support ledge.

9. The ***slide cutter*** assembly as described in claim 1, each of said first and second roll supporting portions being integrally formed with said elongated body and being hingedly movable relative thereto by a living hinge.

10. The ***slide cutter*** assembly as described in claim 9, said first and second roll supporting portions further comprising first latching portions, said associated ends of said elongated body further comprising second latching portions which, upon pivoting of said roll supporting portions, interengage with said first latching portions.

11. The ***slide cutter*** assembly as described in claim 10, said first and second roll supporting portions each further comprising a planar portion from which projects a circular cross sectional shaped core support portion, a support tab projects from an associated edge of at least one of said planar portions and for assisting in supporting said assembly during automated end load cartoning of a loaded ***slide cutter*** assembly.

12. The ***slide cutter*** assembly as described in claim 11, said core support portion further comprising a tapered extending edge to facilitate guiding into the associated open ends of the roll core during engaging rotation of the roll supporting portions.

13. The ***slide cutter*** assembly as described in claim 11, said core support portion further comprising a conical shaped edge to facilitate

guiding into the associated open ends of the roll core during engaging rotation of the roll supporting portions.

14. The *slide cutter* assembly as described in claim 11, further comprising at least one dimple projecting from an outer face of each of said planar portions, said dimples assist in mechanically holding said assembly within a conventional carton interior associated with the material roll.

15. The *slide cutter* assembly as described in claim 5, further comprising first and second rail side supports secured atop said elongated body, said supports terminating in first and second end stops which, upon engagement of said rail, define abutting end locations of said traversable blade.

16. The *slide cutter* assembly as described in claim 8, said rail further comprising a co-extruded tacky material applied upon a top surface thereof for establishing film wrap attraction.

17. The *slide cutter* assembly as described in claim 1, further comprising a generally elongated and three dimensional shaped packaging, said cutter device being supported within an interior defined within said packaging and upon mounting the roll between the first and second supporting portions.

18. A *slide cutter* assembly for use in sectioning lengths of a film wrap material drawn from a roll, the roll including a core having oppositely open ends, said assembly comprising: an elongated body having a first end and a second end, a planar shaped and elongated

support ledge being defined along an upper surface of said body; a first roll supporting portion located at a first end of said body and a second roll supporting portion located at a second end, said roll supporting portions each further comprising living hinges for permitting said supporting portions to be pivoted into opposingly engaging contact with the oppositely open ends of the film roll core and in order to rotatably secure the packaging roll to the elongated body; and a cutter assembly located along a lengthwise extending surface associated with said elongated body, said cutter assembly incorporating a traversable blade seated within an elongated rail secured upon said elongated body and for sectioning from the roll an unwound length of the material.

19. The *slide cutter* assembly as described in claim 18, said support ledge further comprising a contoured edge and exhibiting properties for preventing the film wrap from adhering to the surface of the support ledge.

20. A *slide cutter* assembly for use in sectioning lengths of a flexible material drawn from a roll, the roll including a core having oppositely open ends, said assembly comprising: an elongated body; a first roll supporting portion located at a first end of said body and a second roll supporting portion located at a second end, each of said roll supporting portions further comprising a planar portion from which projects a circular cross sectional shaped core support portion, the oppositely open ends of the film roll core seating within said first and second core support portions and in order to rotatably secure the packaging roll to the elongated body; and a cutter assembly located along a lengthwise extending surface associated with said elongated body, said cutter assembly incorporating a traversable blade and associated rail portion for sectioning from the roll an unwound length of the material.

21. The **slide cutter** assembly as described in claim 19, further comprising a generally elongated and three-dimensional shaped packaging, said cutter device being supported within an interior defined within said packaging and upon mounting the roll between the first and second supporting portions.

22. The **slide cutter** assembly as described in claim 20, said cutter assembly further comprising first and second offset track seating portions for facilitating translation of said blade a selected distance beyond an associated extending edge of said rail portion.

23. A **slide cutter** assembly for use in sectioning lengths of a flexible material drawn from a roll, the roll including a core having oppositely open ends, a generally elongated and box-shaped container holding said roll, said assembly comprising: a planar shaped member secured to a front facing side of the box, said member including a top extending rail portion; and a cutter tab secured within said rail portion in traversable fashion and including first and second angled blades for sectioning lengths of the material drawn from the roll.

24. The **slide cutter** assembly as described in claim 23, further comprising a plurality of rivets for securing said extruded member to an inner facing surface of the box.

25. The **slide cutter** assembly as described in claim 23, said cutter tab further comprising a pair of offsetting end stop portions which, in combination with said top extending rail portion, permits said angled blades to extend a distance beyond an associated end of said top

extending rail portion.

26. The *slide cutter* assembly as described in claim 25, further comprising an end stop located at each end of said top rail extrusion and operable to maintain said cutter tab in place.

27. The *slide cutter* assembly as described in claim 23, further comprising roll supporting portions formed into sides of the carton and which assist in positionally and rotatably securing the roll of wrap material for selective unreeling and sectioning.

28. The *slide cutter* assembly as described in claim 27, said roll supporting portions further comprising push-in tabs.

Description

[0001] CROSS-REFERENCE TO RELATED APPLICATIONS

[0002] The present application claims the priority of U.S. Provisional Application Serial No. 60/388,038, filed Jun. 12, 2002, and entitled "Insertable *Slide Cutter* for Use with Wrap and Packaging Materials"; as well as the priority of U.S. Provisional Application Serial No. 60/397,961, filed Jul. 23, 2002, and entitled "*Slide Cutter* Assembly Incorporated Into a Container Configuration Which Holds and Dispenses a Roll of Packaging Materials"; as well as the priority of U.S. Provisional Application Serial No. 60/401,683, filed Aug. 6, 2002, and entitled "*Slide Cutter* Assembly for Use With a Roll of Packaging Materials"; as well as the priority of U.S. Provisional Application Serial No. 60/414,159, filed Sep. 27, 2002, and entitled

"**Slide Cutter** Insert Assembly with Configured Cutter Tab"; as well as the priority of U.S. Provisional Application Serial No. 60/423,543, filed Nov. 4, 2002, and entitled "**Slide Cutter** Insert Assembly Including Gripping Tabs for Securing Within a Packaging Container Associated with a Roll of Wrap Material as Well as Latching Means for Fixedly Securing Hinged Roll Supporting Ends".

FIELD OF THE INVENTION

[0003] The present invention relates generally to **slide cutter** assemblies for use with severing unreeled sections of wrap material from a roll thereof. More particularly, the present invention discloses such a roll supporting **slide cutter** assembly incorporating a traversable cutter tab and which is in particular capable of being supported within a conventional carton enclosure associated with the roll of wrap material.

BACKGROUND OF THE INVENTION

[0004] The prior art is replete with examples of wrap dispensing and cutting devices, the purpose for which is to cut or section an unwound length of a packaging or covering type material. The most commonplace of such devices are typically provided as generally elongated and rectangular shaped packaging within which is held a suitable roll of material. A shelf edge of the packaging, typically revealed upon pivotally opening an associated lid, includes a serrated knife-edge such that, upon unwinding the desired length of packaging, the wrap may be biased against the knife edge and the unwound section removed.

[0005] Shortcomings associated with the conventionally known knife-edged packaging include the incidence of the unwound packaging not severing properly and/or becoming bunched or folded together. With particular regards again to such conventional types of packaging, this can result in the sectioned packaging being substantially rendered useless.

[0006] Accordingly, attempts have been made in the relevant art to improve upon the sectioning and removal of such conventional packaging materials. One example of this is illustrated in U.S. Pat. No. 4,957,023, issued to Chen, and which teaches a plastic wrap dispenser with a battery-operated cutting device adapted for cutting a section of thin plastic wrap from the roll. The cutting device is fixed on a mount and is able to be slidably moved along a fixed track by way of a transmission mechanism activated by a battery-powered motor.

[0007] A further example of a manually operable sectioning device is taught by U.S. Pat. No. 6,223,639, issued to Chen, and which teaches an aluminum foil safety fixture which utilizes a slide plate for gradually separating the foil. The slide plate includes arched pressing edge, fitted to a push unit installed with at least one pair of slide pressing rollers, and movably assembled in a slide rail associated with a main base unit. A supporting plate extends from the main base unit and a clasp plate can be directly fitted to a wall of the aluminum foil packaging box to facilitate unwinding and sectioning of lengths thereof.

[0008] Similar to Chen U.S. Pat. No. 6,223,639, other and additional

examples of film cutting devices include U.S. Pat. No. 5,758,559, issued to Captao, and U.S. Pat. No. 5,440,961, issued to Lucas, Jr., each of which include a track mechanism of some sort mounted in lengthwise extending fashion to an exposed shelf edge of a conventional packaging and including a type of button configured sectioning blade for traversing the length of the track mechanism over which is laid the packaging.

[0009] Finally, an additional set of prior art references teach cutter assemblies in which a *slide cutter* according to some configuration is built into a housing, in turn configured to hold a roll of the wrap material. Examples of such assemblies include those disclosed in U.S. Pat. No. 6,105,481, issued to Schuler, U.S. Pat. No. 4,197,774, issued to Singh et al., and U.S. Pat. No. 4,156,382, issued to Baker.

SUMMARY OF THE INVENTION

[0010] The present invention is a *slide cutter* assembly for use in sectioning lengths of a packaging material drawn from a conventional roll. The *slide cutter* assembly is also an improvement over prior art devices in that it is capable of supporting the roll of packaging material in secure and rotatable fashion, while at the same time capable of being supported, in a preferred embodiment, within a generally elongated and three-dimensional configuration of a carton-type product packaging associated with the roll of material.

[0011] The *slide cutter* assembly includes an elongated body having a top edge established by a perpendicularly extending film support ledge, a bottom edge, a first end and a second end. First and second roll supporting portions are, in the preferred embodiment, integrally

formed with the ends of the elongated body and are each typically interconnected with the main carrier body by means of a flexible and living hinge.

[0012] Each of the roll supporting portions also includes a planar base support and a circular cross sectional shaped and extending core support portion. It is further envisioned that the extending core support portions are capable of being configured in any one of a number of different tapered or angled variants, the purpose of which is to facilitate seating within the associated open end of the roll holding the flexible material and such as during pivoting of the roll support portions relative to the main body. Interengaging latch portions establish the roll supporting portions in a substantially 90.degree. angle relative to the extending main body and such that the core support portions are seated within the oppositely extending and open ends of the roll of wrap material upon them being rotated into place.

[0013] A cutter assembly extends in lengthwise fashion from an associated upper edge of the main planar shaped body. The cutter assembly is preferably secured in traversable fashion along an associated edge of the elongate main body.

[0014] In the preferred embodiment, the cutter assembly includes a blade assembly exhibiting both a gripping portion and a track seating portion, between which is situated first and second angled blade edges. A rail, typically constructed of a coextruded plastic material, is mounted to an upper extending edge of the elongated body, typically by seating elongated and downwardly extending gripping portions associated with the rail upon projecting snap portions associated with the main body. The top surface of the rail may exhibit film attracting properties and in order to assist in drawing upon the rail any type of

either electrostatically attracting wrap material (such as again film wrap) or adhesively attracting material, and such as may be accomplished by applying a tacking material.

[0015] An axially extending and interior channel is associated with the rail and within which is seated the track seating portion of the cutter assembly. End stops are further associated with the upper edge of the main body and, upon assembly of the rail, prevent inadvertent removal of the cutter tab from the rail. End stop geometry works in conjunction with the cutting tab design to maximize the width of the wrap that can be sectioned for a given *slide cutter* assembly width and by virtue of permitting the cutting tab to extend partially beyond the associated rail.

[0016] In use, the roll of wrap material is mounted in rotatably supporting fashion between the roll supporting portions and such that the flexible material to be withdrawn (plastic wrap, foil, paper, etc.) is arrayed in either an over roll or under roll dispensing condition. It is also a preferred embodiment of the invention that the cutter assembly is capable of being supported within the confines of a conventional, three-dimensional and elongated carton, and with which the roll material is usually initially packaged. Upon withdrawing a desired area (length by width) of the flexible material, the cutter tab is actuated, substantially across the traversable length of the rail, and in order to section the desired area of material from the roll.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] Reference will now be made to the attached drawings, when read in combination with the following detailed description, wherein

like reference numerals refer to like parts throughout the several views, and in which:

[0018] FIG. 1 illustrates a perspective view of the insertable *slide cutter* assembly in use with a roll of wrap material and supported within a conventional carton according to the present invention;

[0019] FIG. 1A is a perspective illustration of the *slide cutter* assembly according to an alternate configuration and which in particular illustrates the manner in which the cutting tab with offset track seating portions is capable of displacing a selected distance beyond an outermost edge of an associated rail support;

[0020] FIG. 1B is an enlarged end view in perspective of the *slide cutter* assembly illustrated in FIG. 1A;

[0021] FIG. 2 is an exploded view in perspective of the insertable *slide cutter* assembly according to FIG. 1 and illustrating the features of the cutting tab, extruded plastic rail and main carrier according to the present invention;

[0022] FIG. 3 is a sectional view of a roll supporting spool holder in hinged relationship with the main carrier body and further illustrating the film support ledge of the main carrier in addition to the features of the end stop and rail side supports according to the present invention;

[0023] FIG. 4 is a sectional illustration of a variation of the roll supporting portion and main carrier body shown in FIG. 3, and further

illustrating the support portion exhibiting an increased length of lead-in edge in order to provide guiding support of the product roll core during the 90.degree. rotation of the support portion relative to the main carrier body;

[0024] FIG. 5 is a still further variation in sectional illustration of a selected and hinged associated roll support portion, and showing a conical addition to the support portion in order again to provide a guide into the product roll core during the 90.degree. rotation of the support portion relative to the main carrier body;

[0025] FIG. 6 is a sectional view of the cutter knob mounted in traversable fashion within the co-extruded rail and according to the present invention;

[0026] FIG. 6A is a perspective view of a cutter tab according to a modified variant of the present invention;

[0027] FIG. 6B is a bottom view of the cutter tab illustrated in FIG. 6A and further showing the offset configuration of the track seating portion and in order to permit the cutter tab to translate a partial distance beyond the associated rail;

[0028] FIG. 6C is a side elevational view of the cutting tab illustrated in FIGS. 6A and 6B;

[0029] FIG. 7 is a perspective view of a combination rail and cutting tab arrangement mounted directly to such as a wall of a cardboard roll

supporting container;

[0030] FIG. 8 is an enlarged end perspective of the arrangement illustrated in FIG. 7 and again showing the ability of the cutter tab with offset track seating portions to displace a preselected distance beyond the associated end of a rail support; and

[0031] FIG. 9 is a rotated perspective illustration, showing a roll supporting carton container in phantom, and again illustrating the combination rail and cutting tab according to the embodiment of FIG. 7

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0032] Referring to FIG. 1, a *slide cutter* assembly is illustrated at 10 for use in rotatably supporting and sectioning lengths of packaging material associated with a wound roll 12 of such material. As described previously, the present invention is an improvement over prior art devices in that it is capable of supporting the roll of packaging material in secure and rotatable fashion, either in an over dispensing or under dispensing condition, this further being a variable of the direction in which the leading edge of the roll unreels.

[0033] Additionally, the *slide cutter* assembly 10 is capable of functioning alone with the wound roll 12 of packaging material supported thereupon or, alternatively, may be inserted in substantially contained fashion within the generally elongated and three-dimensional configuration of the product packaging. The carton, 13, as shown in phantom at 13 in FIG. 1, includes three elongated and

interconnecting sides 14, 16 and 18, a fourth side 20 hingedly connected along side edge 18, such that the fourth side 20 defines a lid and further includes an angled end flap 22. Although not clearly illustrated in FIG. 1, the carton also includes ends, which interconnect with the three elongated sides 14, 16 and 18, and a representative end is shown at 24. To again confirm what has been previously explained, the *slide cutter* assembly can function either as an insert within the conventional wrap carton or, alternatively, can operate exclusive of the carton and such as further by either mounting the assembly upon any suitable surface or utilizing the assembly in a free standing and supported manner.

[0034] Referring again both to the assembled view of FIG. 1 and the exploded view of FIG. 2, the assembly 10 includes an elongated body, referenced generally at 24 in FIG. 2. The body 24 defines a main portion of the *slide cutter* assembly and is usually constructed of a suitable and molded material, although it is further understood that other materials can also be utilized within the scope of the invention.

[0035] The elongate extending length of the main body may include (without limitation) apertured portions, such as illustrated by inner facing surfaces 26, 28 and 30, and in order to reduce weight and material investment. Additional features include an upper ledge 32, with contoured edge surface 33, typically supported at 34 and 36 (see again FIG. 2) relative the main body, and upwardly projecting snap portions 38, 40 and 42, extending from a base surface 44 (again FIG. 2) of the main body which facilitates installation of an attachable rail atop the base surface 44. Also extending upwardly from the main carrier body 24 are first and second end stops 46 and 48 and which (as will be further described in greater detail) maintain the cutting tab (to be further disclosed) within the cutter assembly, while maximizing the width of film that can be cut for any given *slide cutter* assembly

width.

[0036] A pair of roll supporting portions are illustrated generally at 50 and 52, see again as best shown in FIG. 2 as well as in FIG. 3, and according to a preferred embodiment of the present invention. Each of the roll supporting portions 50 and 52 includes a planar disposed portion, see at 54 and 56 respectively, as well as a circular cross sectional shaped and projecting core support portion, see at 58 and 60.

[0037] As further shown in FIG. 1, a representation of a roll of flexible material is shown and includes oppositely open core ends (see at 62 in FIG. 1) as well as an unreeled area of material, see at 64. As again described previously, the flexible material is most broadly described as including any suitable material capable of being dispensed from a roll, such further including plastic (film) wrap, foil, paper or any other suitable material.

[0038] The roll supporting portions 50 and 52 are pivotally secured to the opposite ends of the main body 24 by virtue of living hinges, see at 66 and 68 respectively. First and second pairs of latching portions are associated with each of the first and second roll supporting portions 50 and 52, and such is further illustrated at 70 and 72 for roll supporting portion 50 and at 74 and 76 for roll supporting portion 52.

[0039] Each of the latching portions 70 and 74 are constructed according to a first configuration with a male projecting portion and by which they are respectively seated between pairs of spaced apart and biasing members associated with the latching portions 72 and 76. In this fashion, and as is best illustrated in FIG. 1, the roll supporting portions 50 and 52 are rotated inwardly to approximately a 90.degree.

angular orientation relative to the main carrier body 24, at which point the projecting core support portions 58 and 60 seat within the oppositely open ends of the roll of material and to thereby rotatably support the roll of material upon the assembly 10. Also shown at 78 and 80 (see FIGS. 1 and 5) are gripping dimples which project from an outer face of each of the planar portions 54 and 56 and which function to assist in mechanically holding the cutter assembly 10 within the conventional carton interior (see again FIG. 1) and during use.

[0040] It is further understood that the *slide cutter* assembly, while preferably being capable of shipped in a substantially flattened condition and such as is permitted by the rotatable roll supporting portions, can also incorporate other suitable roll supporting portions, such as those which are not connected by living hinges, but rather are flexibly connected to the ends of the main carrier body 24, and without the additional need of latching portions, and such that they are already substantially in their perpendicular angular relationship. It is envisioned that, in such an application, the roll supporting ends are simple biasingly flexed to seat over the open core ends of the roll.

[0041] As best illustrated in FIG. 2, an elongated rail is generally illustrated at 82. The rail is preferably constructed of an extruded plastic material or materials, such as constructed from an ABS, PVC or other suitable material. It is also contemplated that the rail may be constructed from other materials, either machined, molded or formed by conventional process techniques, and which are contemplated to be within the scope of the present invention. The rail 82 includes, as is best shown in cross section, an interior upper channel 84 communicable with a top surface of the rail by a gap 86, and as well as a pair of downwardly extending and elongated/biasing gripping portions 88 and 90.

[0042] A cutter assembly is provided in combination with the attachable and elongated rail and such includes the provision of a cutter tab assembly 92 (see again FIG. 2). In a preferred embodiment, the cutting tab 92 includes a stainless steel blade having oppositely angled edges 94 and 96, a first or upper gripping portion 98 (typically ergonomically configured) and a second or lower track seating portion 100, and which is configured for inserting in end fashion within the interior channel 84 of the elongated rail 82. As will be further explained in reference to FIGS. 6A-6C, as well as FIGS. 1A and 1B, the lower track seating portion preferably incorporates offset seating portions in order to enable it to extend a partial end distance beyond an associated rail support. However, and for purposes of FIG. 6 only, it is also understood that the track seating portion can adopt any configuration, such as including a smooth and substantially "U" end sectional shape as illustrated.

[0043] The cutter tab blade is constructed so that it lies symmetrical about a vertical centerline established by the tab cutter and thereby so that it, upon being installed within the rail, is traversable in both directions to cut the flexible material. The blade may further be made from other materials such as carbon steel, plastic or any other material that will enable a smooth cut of the product being severed.

[0044] In use, the cutter tab 92 is first mounted in its end inserting fashion within the rail 82, the rail then being attached in seating fashion upon the surface 44 of the main carrier body 24 and by biasingly/snappingly engaging the downwardly extending gripping portions 88 and 90 upon the upwardly projecting snap portions 38, 40 and 42 and further such that the rail 82 is rendered more rigid by being secured atop the main carrier body and seated between the closed end stops 46 and 48. The traversable path of the cutter tab 92 is

such that it extends a selected distance beyond an end of the unreeled flexible (wrap) material 64 and to facilitate complete cutting of the wrap material in end-to-end fashion.

[0045] The top surface of the rail 82, in proximity to the blade traversing gap 86, operates to attract the unreeled surface of the flexible material and in order to facilitate the operation of the cutter tab 92. In particular, the rail may include the application of a tacky surface and which serves to hold such as a film material for cutter, as well as to keep the film at a convenient and consistent location so that it can be acquired for a succeeding cut. The rail may also include the provision of a tacky or, alternately, application of electrostatic attracting properties in order to draw or adhere such as a film wrap layer thereupon. It is also contemplated that the ledge, 32, may also be roughened or otherwise material selected to make it unattractive (non-adhering) to the product being severed.

[0046] The plastic portion associated with the cutter tab 92 is further preferably constructed of a High Impact Polystyrene (HIPS) material and in order to provide a safe human interface to the angled surfaces of the cutting blade. Insert molding of the blade within the cutter tab is preferred, but the blade may also be inserted within molded pieces which are then glued, ultrasonically welded, or similarly joined together to secure the blade. Plastic blades may be molded as an integral part of, and at the same time as, the rest of the cutter tab. It is also envisioned that the bottom of the track seating portion 100 of the cutter tab may be designed such that the tab can extend partially past each of the end stops 46 and 48 (see FIG. 6) of the carrier and in an attempt to limit the overall length of the conventional box design.

[0047] Referring to FIG. 4, a sectional illustration of a variation of the

roll supporting portion and main carrier body previously shown in FIG. 3 is further illustrated. Of note, the circular cross sectional and projecting core support portion 102 exhibits an increasing length lead-in edge (see edge taper 104) in order to provide guiding support of the product roll core during the 90.degree. rotation of the support portion relative to the main carrier body. Also illustrated at 106 in FIG. 4 is a support tab which extends normally from an end face of the planar portions associated with an end supports and which, in the engaged position of FIG. 1, assists in supporting the *slide cutter* assembly in level fashion, and as the assembly is end loaded into a carton.

[0048] Referring to FIG. 5, a still further variation in sectional illustration is shown of a selected and hingedly associated roll supporting portion. In particular, and in contrast to the illustrations of either FIGS. 3 or 4, FIG. 5 shows a conical addition 108 to an associated and pivotable roll support holder 110 in order again to provide a guide into the product roll core during the 9020 rotation of the support portion relative to the main carrier body.

[0049] Referring now to FIGS. 6A-6C, a preferred variation 112 is illustrated of a cutter tab according to the present invention and which was previously alluded to in the above-referenced description of FIG. 6. The cutter tab 112 is similar to that previously illustrated and described at 92 in FIG. 2, and includes such common features as an upper and ergonomically configured gripping portion 114 and a blade (steel, plastic or otherwise) exhibiting oppositely angled and cutting edges 116 and 118. In the preferred embodiment, a stainless steel blade is molded into a plastic holder and is configured so as to be symmetrical about a vertical centerline, enabling it to cut in both traversable directions.

[0050] Of note, the preferred embodiment of the cutter tab 112 further includes a lower track seating portion having first 120 and second 122 angularly offset portions. The purpose of the offset portions 120 and 122, as previously described, is to facilitate the translation of the cutter tab 112 a partial distance beyond an edge of an associated rail (not shown) and to ensure complete sectioning of a length of wrap material. Additionally, the configuration of the offsetting portions 120 and 122 is such that the overall length of the box enclosure can be minimized and further that, upon sliding the tab into the rail 82 extrusion with top extending slot 86, the cutting tab is securely captured into the assembly. Reference is further made to the illustrations of FIGS. 1A and 1B which present a first overall and second enlarged end perspective of a *slide cutter* assembly according to a further preferred embodiment and by which a selected offset seating portion (120 or 122) is permitted to extend a selected distance beyond an associated end of the rail support 82 and selected end stop (46 or 48).

[0051] As also illustrated at 124 and 126 in FIGS. 6A and 6C, rivets 124 and 126 can be formed in the sides of the cutter tab 112 and in order to secure the blade (see edges 116 and 118) in place. As further illustrated in FIG. 6A, a thermal riveting process, as well as any type of mechanical riveting process, may be employed for securing the blade within the tab assembly.

[0052] Referring now to FIGS. 7-9, a series of rotated perspective views are shown of a combination rail and cutting tab arrangement mounted directly to a wall of a roll supporting container, such as again may be formed of a cardboard or other suitable material. FIG. 7 illustrates at 124 a first perspective view of a combination rail and cutting tab arrangement mounted directly to such as the wall of a cardboard roll supporting container 13 and such has been previously

substantially described and illustrated in FIG. 1A.

[0053] In particular, an extruded, and typically planar shaped, member is illustrated at 126 and is attached, such as directly to an inside surface of a front side 14 of the cardboard box in, one preferred arrangement, by a plurality of rivets 128. It is also understood that the extruded *slide cutter* piece 126 can alternatively be attached by such as gluing, stapling, or otherwise affixing to the box front.

[0054] As is also illustrated in the enlarged perspective of FIG. 8, again shown is the cutter tab assembly 112 as described in FIGS. 6A-6C. Upon being mounted within a rail portion 130 forming a top extending edge of the extrusion 126, the cutter tab 112 with offset track seating portions 120 and 122 displaces a preselected distance beyond the associated end of the rail support extrusion 130. Although not further illustrated, it is understood that a stop is added to each end of the top rail extrusion 130 and in order to maintain the tab in place.

[0055] Also illustrated in phantom in FIGS. 7 and 8 is one of two roll supporting portions, see at 132, which are formed into the sides of the carton and which assist in positionally and rotatably securing the roll of wrap material for selective unreeling and sectioning. It is further understood that the roll supporting portions can be provided as push-in tabs (see further at 134) which maintain the roll sufficiently in place. Although further not shown, it is also understood that the carton design of FIGS. 7-9 can include the top extending shelf or ledge with contoured edge surfaces (see such as at 32 and 33 in FIG. 1) and it is desired that the roll of material is held in a direction toward the rear of the container in order to prevent the roll from repositioning under the *slide cutter* or top extending shelf.

[0056] Having described the presently preferred embodiments, it is to be understood that alternative embodiments may be incorporated without deviating from the scope of the appended claims. In particular, the shaping of the blade assembly 32 may be altered to any desired configuration and may further contemplate the incorporation of a designer button or the like.

[0057] As also previously described, the assembly can be constructed so that it is capable of being shipped in a substantially flattened configuration, through the use of the living hinges, and such as is further loaded into an existing carton packaging and along with the roll of wrap material. It is also envisioned that the assembly can be constructed as multiple components according to any type of manufacturing, e.g., extrusion molding, etc.

[0058] It is also contemplated that the *slide cutter* assembly can be constructed integrally with the box carton, within which the roll of wrap material is held. Such a configuration may further include the provision of the cutter tab and rail incorporated into a wall of the box, and combined with the provision of the roll supporting supports built directly into the sides of the box.

Exhibit N
of Supplemental Declaration of Vegliante

[REDACTED]

From: McGrath, Nathaniel
Sent: Wednesday, May 14, 2008 9:13 AM
To: Powers, John; Scoledes, Jim; Webb, Joe; Vegliante, Paul
Cc: Ariza, Patti
Subject: RE: Wal-Mart & Sams Club

John
Paul Warnica sent me a note with all the web site and I just added a few comments.
If you require any further information please let me know.
Nat

From: Warnica, Paul
Sent: Tuesday, May 13, 2008 6:07 PM
To: McGrath, Nathaniel
Subject: Competitive Slide Cutters

Nat,

I've redone me email to include a 6th company supplying slide cutters; Durable Packaging International.

1. Pliant

The Rollosheets link is no longer active so I went to Pliant's (U.S) page. Under the Wrap-It link they describe a "serrated blade and slide cutter mechanism" as being available. There are no pictures or further product descriptions provided. I have never seen a Wrap-It box with a slide cutter (other than ours).

www.pliantcorp.com

[McGrath, Nathaniel]

Pliant uses the Zip safe blade to go to market with 2 items.]
12"x3000' Kirkland Brand and 11x1000' Vita Wrap.

2. Anchor

Their web page provides a product description, picture and code for their "Purity Wrap Safety Cutter". It comes in a 30 pack and is available in 12, 18 and 24" widths. From the photo it seems very similar to our slide cutter. I've never seen one in the field. I've left a message for Barry, though have not heard back.

[McGrath, Nathaniel]

A couple of the OPCO branches of Sysco buy Anchor Slide Cutter type blade.]

www.anchorpackaging.com

3. Western Plastics

They have, what appear to be, our old yellow slide cutters listed on their web site. They offer 12 and 18" widths.
www.wplastics.com

[McGrath, Nathaniel]

12/10/2009

Western does make the blade available, all though I've never seen one in our market.

4. Reynolds

There are no cutter options offered on their Canadian site other than the "Grit Edge". I know they approached Sysco Peterborough several years ago with a version of our slide cutter, though apparently it didn't work very well, and in fact they refused to leave them a sample. Other than the one I saw in our office, I have never seen their slide cutter in the field.

www.reynoldsfoodpackaging.ca

[McGrath, Nathaniel]

Reynolds doesn't go to market here in Canada with a Slide Cutter type blade.

5. Ralston

Their PE cutter box is still listed on their web site. It comes with a "safety slider cutter blade". A former Ralston rep told me that they are no longer pushing this product.

www.ctigroup.com/ralston/english

[McGrath, Nathaniel]

3 years ago Ralston came to market with a polyethylene based film in 11" and 17"x2500' dispenser/ Slide Cutter type blade.

They never got a 2nd order and we have seen or heard of them in 2 years.

We sold Ralston 650,000 lbs of PVC last year through Trinity plastic.

6. Durable packaging Int'l

Although their web site doesn't mention them, their price list clearly lists a "safety slide cutter disp box". Available in 12, 18 and 24" widths. There are no pictures on their brochure so I can't tell if they are adhesive blades, though if they ship with each box they most likely are.

www.durablepackaging.com

[McGrath, Nathaniel]

We haven't seen a box in our market yet.

Paul

From: Powers, John

Sent: Saturday, May 10, 2008 4:38 PM

To: Scoledes, Jim; McGrath, Nathaniel; Webb, Joe; Vegliante, Paul

Cc: Ariza, Patti

Subject: RE: Wal-Mart & Sams Club

Lets discuss our Canada patent approval

1. cease & desist
2. royalties

Paul v have u gotten direction from our lawyers?

From: Scoledes, Jim

Sent: Thursday, May 08, 2008 3:44 PM

To: McGrath, Nathaniel

Cc: Powers, John; Scoledes, Jim

Subject: Wal-Mart & Sams Club

Hello Nat,

12/10/2009

Can you advise me as to who the current vendors are to Wal-Mart and Sam's Club in Canada?

A sample of each would be appreciated.

Thanks,
Jim Scoledes
124 San Remo Drive
Islamorada, Fl. 33036

305-607-4136